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A CASE OF UTERINE FIBRO-CYSTOMA.

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Mrs. B., aged 51, died in Winona, Minn., Aug. 31, 1876, from what was supposed to be ovarian tumor; but what was found, on *post mortem* examination, to be uterine fibro-cystoma.

I was called to attend the case only a few days before death. There was extreme emaciation, complete loss of appetite, with diarrhœa and an aphthous condition of the mucous membrane of the mouth. Death resulted from septicæmia and prostration.

Dr. J. B. McGaughey, of Winona, assisted me in the autopsy. On making the incision through the attenuated abdominal walls, we came upon what we supposed was a large ovarian cyst, occupying, equally on each side, the whole abdominal cavity, crowding the intestines upward and backward. There was no fluid in the peritoneal cavity. On feeling for the pedicle we found, in the inguinal region of both sides, attachments which proved to be from the broad and round ligaments of the uterus; and in front and beneath

what we at first supposed to be visceral and parietal adhesions, but what proved to be simply the reflections of the peritoneum to the bladder and pelvic parietes. In short, we had, instead of an ovarian cyst, not simply a subserous fibroid attached to the fundus of the uterus, but a fluctuating tumor involving the uterus itself; the broad ligaments with their inclosures extending from the fundus of the mass. The whole was easily removed by dividing the attachments to the inguinal regions, the peritoneum at its reflections from the tumor and the vagina just below the os uteri. The weight of the mass was 14½ pounds.

The appearance of the tumor: 1st, On its anterior aspect and without disection. 2d, On the left side with the uterine cavity laid open; and, 3d, With the mass laid open from behind showing the cavity of the large cyst, is shown in the cuts 1, 2 and 3.

FIGURE 1.

ANTERIOR ASPECT OF TUMOR—showing uterine appendages in their relation to the Mass, and the os and cervix uteri.

The interest in this case is not alone on account of the rarity of this form of tumor, but especially because of the

liability of confounding, in diagnosis, this with ovarian cystoma.

The rules laid down by Wells, as a guide in the differential diagnosis between uterine and ovarian tumors, do not hold in many particulars when the uterine tumor is of the cystic variety, and especially when in case of a monocyst of large size.

The following points from what of the history of the case I was able to obtain, and from examination before and after death, are given in connection with Peaslee's table of differential diagnosis between uterine fibro-cystoma and ovarian cysts.

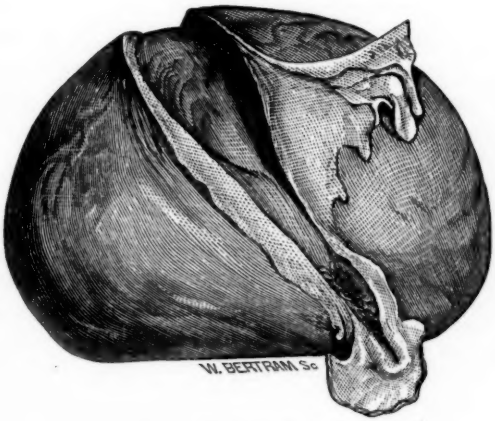

FIGURE 2.

LATERAL VIEW OF TUMOR — with the uterine cavity laid open, showing the tumor to be in the posterior uterine wall.

UTERINE FIBRO-CYST. 3d stage.	OVARIAN CYST. 3d stage.
Occurs after thirty almost always.	Occurs earlier than thirty years, as well as later.
My patient was 51 years old.	
Slow growth at first. Rare.	More rapid, and more common.

Ten years ago complained of difficulty in lower left side of abdomen. She was fleshy and no distinct tumor was made

out. There was lameness through the left hip. Her general health had always been good, but from early life she had complained of pain in the back.

Expression good till very large.	Expression characteristic (*Facies ovariana*).

There was the peculiar expression and emaciation of the face which Wells, Brown and Peaslee have described as charteristic of the subject of ovarian tumor in the advanced stage.

Complexion dark and injected, (*facies uterina.*) Sometime florid. No emaciation.	Pale, emaciated.

The first description would apply to the patient until about a year and a half ago, when a gradual change was apparent; and for several months before her death the last description was as equally applicable.

General health for a long time good.	Has failed by the end of the second stage.

The general health was good until near the end of life. For the last two years, however, the stomach has been irritable sometimes, and there has been occasional loss of appetite.

Abdominal veins not enlarged.	Enlarged.
Not enlarged.	
Umbilicus not prominent.	Umbilicus prominent.
Somewhat prominent.	
No amenorrhœa. Menorrhagia seldom.	Amenorrhœa.

Menstruation was regular and normal until five years ago. No menstruation since. Her age was 51. She was never pregnant, had been married 34 years.

Kidneys normal,	Kidneys inactive.
Variable; generally normal;	sometimes inactive.
Tenderness on pressure at first.	Not tender.

There may have been tenderness at first, but not in the later history.

Elasticity, afterward evident fluctuation.

Fluctuation throughout its course.

Only examined late in its course; then very decided fluctuation.

Surface lobulated at first. May remain so.

Not lobulated, except in polycysts.

Not lobulated.

Cyst wall of livid hue. Very vascular.

Cyst wall of lighter color. Less vascular.

Seen only after death, but evidently more vascular than in ovarian tumor.

Per vaginam, uterus moved with tumor if at all.

Uterus movable independent of tumor.

As to mobility of the uterus separate from the tumor, I was in the present case completely mistaken. The tumor was held firm by the abdominal parietes closely drawn over it; and the length of the os and cervix (see cuts) allowed such mobility here that I was led to believe that I had the whole of the uterus separate from the tumor. I believed the uterus to be atrophied, it never having been impregnated, and the patient being five years past the menopause.

Uterine cavity elongated generally.

Not elongated.

I was not able to introduce even the smallest sound during life. In the *post mortem* examination the uterine cavity was found to be elongated over half the circumference of the tumor. (See cut No. 2.)

Fluid, yellow, serous, with little albumen, or fibrinous like lymph, and spontaneously coagulable. But it may be dark brown or hæmorrhagic.

Lighter in monocysts not before tapped; highly albuminous; sometimes colloid.

There was in the large cyst four pints and a half of dark hæmorrhagic, serous fluid. It was without odor. There was

in the cavities and interstices of the solid portion of the tumor considerable sero-purulent matter, of a light muddy color. The structure of this part of the mass had evidently suffered change, had been softened and partially broken down by recent changes tending to suppuration. This accounts for the septicæmia which was the immediate cause of death.

Concerning this form of tumor Dr. Peaslee has the following: "If we follow the development of the uterine fibroma, we find that cysts are liable to be developed in it as a secondary formation. We then have one of the forms of fibro-cystic tumor of the uterus.

FIGURE 3.

TUMOR LAID OPEN FROM BEHIND—showing one large cyst, the honeycombed structure of the solid portion of the tumor, with smaller cysts in the same, and with muscular wall of the uterus involving the whole.

"Recognized as a distinct class of tumors but a few years since, and first described by Cruveilhier, they have frequently been mistaken for ovarian cysts by the ovariotomists. Sometimes they have been removed as ovarian cysts and the mistake discovered only by a subsequent examination of the mass removed, or by a *post mortem* investigation which showed both ovaries to be in a normal condition."

I. Baker Brown remarks that he knows of no distinguishing signs between uterine fibro-cyst and ovarian cystoma, and Dr.

Peaslee has himself operated for the removal of an ovarian oligocyst in a case of a uterine fibro-cyst, and this even after a tapping by which he removed from the principal cyst 40 pounds of a brownish fluid. This, however, was in the case of a sub-serous cyst attached to the fundus uteri by a pedicle an inch in diameter and a quarter of an inch long. The mass weighed 50 pounds. It was successfully removed, and recovery took place.

More nearly allied to the present case was that reported in the *Boston Medical and Surgical Journal*, for July 13, 1876, as occurring in the practice of Dr. Gilman Kimball, of Lowell, Mass. The tumor was described as a fibrous growth extending by prolongation to the uterus and thoroughly blended with that organ, making one continuous substance. After removal the mass was found to consist of 20 pounds of straw colored fluid and five pounds of solid material; the latter consisting of the cyst, the fibrous growth, both ovaries, parts of the suspensory ligaments of the uterus and the uterus itself. Recovery followed.

Dr. Wm. T. Lusk, in December, 1875, presented a specimen and reported a case of pregnancy with fibro-cystic tumor of the uterus, in which there was almost complete occlusion of the cervix uteri. In delivery eclampsia occurred—version—post partum hæmorrhage, and death from peritonitis and collapse. *Post mortem*, the cavity of the uterus was found to occupy the right side of the growth. The tumor was of the fibro-cystic variety. It was honey-combed, with cells containing a clear fluid. It weighed six and a half pounds. There were extensive adhesions with the intestines. (*Am. Jour. of Obst.*, April, 1876.)

Concerning the comparative frequency of fibro-cystic disease of the uterus, we have the following from eminent writers:

Peaslee. "Fibro-cystic tumors of the uterus were first distinctly recognized only very recently, and are quite rare. Only 14 cases had been reported in 1869, and two of these were detected after death by Kiwisch and Cruveilhier. They may be either sub-peritoneal or interstitial."

"Cruveilhier thinks this form of fibro-cyst is produced by the progressive dilatation of lymphatic vessels; and states that they are always consecutive to some mechanical obstacles to the circulation of the lymph."

"Klob merely quotes a single case from Kiwisch, and alludes to one described by Cruveilhier, after designating such instances as very rare and extraordinary."

T. Spencer Wells. "Of the first 130 operations for tumors (115 being ovariotomy), only two cases proved to be fibro-cystic tumor of the uterus."

Dr. Keith. "In 100 operations of ovariotomy only one case of uterine fibro-cyst occurred."

Dr. Peaslee, from his own observation, and the reports of Drs. T. A. Emmet, Charles Clay and C. C. Lee, concludes that uterine fibro-cysts are far more common in this country than in Europe.

In the "Report on the Progress of Gynæcology during the year 1875," in *Am. Jour. Obstetrics* for April, 1876, is a summary of recent literature and operations for large fibroids and fibro-cystic tumors of the uterus by gastro-hysterotomy. The operators were Thomas Keith, Edinburgh; C. H. F. Routh, London; Jas. R. Chadwich, Boston; W. G. Drake, Atlanta, Ga.; Theodore Billroth, of Vienna; E. Bockel, Robt. Barnes, London; and E. R. Peaslee and T. G. Thomas, of New York. Of eleven operations reported five resulted in recovery.

ATROPIÆ SULPHAS IN ACUTE MYRINGITIS AND OTITIS.

By A. N. ELLIS, M.D., Joliet, Illinois.

No one who has ever treated a case of acute inflammation of the ear need be reminded of the terrible sufferings of his patient, the importance of prompt action, as well as the limited means at his command of giving instant relief.

From the situation of the drum, as well as its peculiar anatomical construction, it is very liable to become affected.

Myringitis, as its name indicates, is an acute inflammation of the membrana tympani. It is not a very common disease, yet physicians meet with it occasionally. It is not confined to any class — all may have it, from the robust to the weakest. Traumatic myringitis is the result of some physical injury. I will refer to two cases of the kind before closing this paper.

The exciting causes of idiopathic myringitis are many. Exposure in damp inclement weather, strong cold winds, bathing in cold water, passing suddenly from the warm and close air of a crowded hall to the street, sleeping in a bed over which passes a current of cold air, etc., etc. Often no immediate cause can be discovered.

Acute myringitis often comes on very suddenly without any premonition whatever; suddenly the patient is aroused from sleep. And how he suffers! Were you to pass a dagger through him he could not suffer more acutely. The pain is almost unendurable. I have seen several cases where the patient became almost frantic. The pain soon extends to the surrounding parts — to the head, face, teeth, jaws, and more or less down the neck. The movements of the jaw in talking or chewing increase it. The auricle soon becomes affected; is exceedingly tender to the touch. The hearing is dull, often lost; there is a sense of fullness and pressure. *Tinnitus aurium* supervenes, and is very annoying. *Autophonia* is a very troublesome subjective symptom.

Objective symptoms.—The objective symptoms, though not many, are very characteristic. The trouble is confined to the drum. A congestion of the membrane is observable. The vessels along the handle of the malleus are injected; the individual vessels are lost in the general redness; the cone of light is obscured. The surface of the membrane may appear convex externally, and has a dark, red, smooth flesh color. The line of union between the skin and membrane is entirely obliterated. After the first few days of agonizing pain and annoying *tinnitus aurium*, an abscess often forms in the membrana tympani, and perforation takes place, followed at once by suppuration. Untreated, the otorrhœa is followed by a long train of evils.

Take in the anatomy of the region at a glance, and what do we find? The lining of the external auditory canal functionates anteriorly as common integument, posteriorly as mucous membrane. The roof of the cavity is thin. Examine it in the skeleton, and you will find it so fragile that it is almost translucent. Lying immediately upon it are the membranes of the brain. Under the floor of the cavity is the jugular vein; anteriorly is found the largest artery of the head — the internal carotid — with the venous sinus in close proximity. These are separated from the cavity of the middle ear by very delicate lamellæ. The inner or labyrinth wall offers but slight resistance to the transition of the inflammation to the facial nerve, fenestrae and internal ear. Who will say that an unchecked inflammation and discharge in this important region is not a dangerous thing? And yet who has not heard physicians give their patients such advice as this: "Let it alone; you will outgrow it. It is dangerous to check a flow from the ear." Can anything be more unreasonable? Is disease safer than health? Otorrhœa *does not get well* as a rule without treatment!

Untreated, the disease soon extends to the neighboring parts, often resulting in otitis externa and interna; fungus growths springing from the cavity of the middle ear; anchylosis of the stapes; closure of the eustachian tube; deafness; caries of the temporal bone, cerebral meningitis! Only the unfortunate who have suffered from these things can fully realize their dire results. Only he who has day after day, week after week, and month after month battled with these troublesome afflictions can estimate the amount of time, patience and skill necessary to bring them to a favorable termination.

Having often witnessed the happy effects of the active principle of belladonna in painful affections of the eye, I was led to use it in the treatment of the ear where an anodyne was demanded.

About six years ago I was called to see a man employed at the building of the iron railroad bridge across the Missouri at Fort Leavenworth. He complained of great pain in his left ear. It had come on suddenly while he was laboring in one

of those iron caissons where the pressure of the air was great. The diagnosis was easy, showing a case of traumatic myringitis. Placing the patient in bed, a few drops of the atropine solution (atropiæ sulph. grs. iv., ad aquæ ʒ i,) were instilled into the ear. Six leeches were applied to the mastoid process, six more in front of the meatus externus. He was discharged on the second day cured.

About four years ago, at Fort Craig, New Mexico, a soldier while standing near a cannon which was being fired was taken with great pain in his right ear. I was absent from the post at the time, and did not see him for some hours. He was lying in the hospital, and complained of great suffering. Blood was seen issuing from the affected ear. Carefully syringing the canal, illumination showed fracture of the malleus. Acute myringitis supervened at once. He was treated with the atropine solution. The artificial leech was used both before and immediately behind the meatus extermus, and about four ounces of blood taken. The results were all that could be desired.

Since that time I have used the atropia in about one dozen cases, and with gratifying success. The medicine should always be warmed slightly by dipping the bottle in warm water before using. Conjoined with the use of leeches, the recumbent position, perfect rest, and the careful exclusion of all exciting causes, I have not seen a case where the remedy failed.

CHICAGO AND OTHER AMERICAN CITIES would do well to establish a system of hospital telegraphy similar to that which has recently proved useful in Paris. All the hospitals and dispensaries are placed in telegraphic communication with a central bureau, where admissions to each institution are obtainable. Thus, without delay, without the often painful and sometimes dangerous journeyings hither and thither, of patients in search of shelter and treatment, information can speedily be obtained upon all requisite points.

Chicago, in particular, separated as its three grand divisions are, would offer great facilities of this character, if a bureau of hospital telegraphy were located in its business center.

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THE SILK WORM EPIDEMIC, PEBRINE, AFTER PASTEUR, WITH SOME REFLECTIONS REGARDING THE ANALOGY OF THIS DISORDER TO CERTAIN DISEASES OF THE HUMAN SUBJECT.

By JOHN BARTLETT, M.D.

(A Paper read before the Chicago Medical Society, Nov. 20, 1876.)*

In 1849 the silk crop of France, then estimated at 325,000,000 lbs., in a great measure failed, because of a disease, the pebrine, epidemic among the silk worms. This failure, growing year by year more serious, induced the French government in 1865 to assign the task of determining the nature of, and remedy for, pebrine, to the distinguished investigator Pasteur. In 1870 appeared the remarkable monograph of this scientist entitled "Etudes sur la Maladie des Vers à Soie," a synopsis of which forms the basis of this paper.

The pebrine is a contagious, infectious and hereditary disease, the cause being the introduction into the system of the worm of a psorospermoid cell, and the growth and development of this in the larva, pupa, moth or egg, leading finally to the destruction of the organism upon which it preys. The name *pebrine*, signifying pepper, has reference to one of the most palpable symptoms of the disease — the discoloration of the skin by numerous black spots or points, suggestive of the insect's having been dusted with pepper.

The *symptoms* as occuring in the worm, are loss of appetite and vigor, and failure of nutrition, as observed in stunted growth. The spots appear primarily on the head and neck as very minute specks; at first yellow, then brown and black. Meanwhile the primitive yellow discoloration invades the neighboring tissues as an areola of the dark spot. Sometimes death results before the period of cocooning arrives; in other cases an imperfect cocoon is formed, or the insect, day after day, makes the to and fro motion of the head, neck and body, as in the act of spinning, no silk meanwhile issuing from the

* Condensed by the Author for this Journal.

silk duct, and the worm finally dying without a covering. The cocoons of pebrined worms are feeble in silk, and this is of a poor quality. The chrysalis may die, or if the disease be mild, it may develop a moth, which may or may not be able to pierce the cocoon and emerge. The moth, if only slightly affected, may present no evidences of disease in appearance, action or function, or such evidence may be manifest in sluggishness of movement, inability to copulate and to lay. When the disease in the miller is severe, it is revealed by striking symptoms; one of these is a dark gangrenous appearance of the posterior half of the body, the other a shrivelled œdematous and ecchymosed condition of the wings. The eggs of badly infected caterpillers are sometimes sterile; if they hatch, worms are produced which speedily perish of pebrine of a ten fold more virulent form than that which affected their ascendants. As the disease is eminently contagious, hereditary and fatal, the havoc made by it would soon prove annihilating in any districts not supplied with healthy stock from abroad.

With the *cause* of the disease, Pasteur associated a brilliant ovoid corpuscle, first noticed in the bodies of pebrined worms by Cornalia, but regarded by him as accidental. Most careful and varied experiments conducted by Pasteur demonstrated that there was no pebrine without this corpuscle, and no corpuscle without pebrine, and that the disease could be produced at will by introducing these germ cells into the bodies of healthy worms. In infected broods, the corpuscles were found in great abundance in all the tissues and fluids of the worms, chrysalides and moths. They existed in the eggs, and were found in large numbers in the litters, and in the dust of the worm houses.

Morbid Anatomy. The intestinal walls were infiltrated with corpuscles; in the skin, in the cellular tissue underlying the pebrined spots, they existed as masses. The silk glands were densely packed with them, so that a section presented a porcelained appearance. This occupation of the glands by the germ cells led at first to the exclusion of their proper secretion and finally to the complete destruction of the organ. The

same was true of the malpighian tubes. The blood of the insect teemed with corpuscles — in short, the aggregation of the disease-cell in all the tissues of the worm ceased only with the destructive occupation of them. In the pupa and moth, substantially the same appearances were presented; in all the tissues a replacement of proper structure by the formed material of the disease-cell had to a great extent occurred. In the egg the corpuscles could be detected; and if numerous, the integrity of the ovum was destroyed.

The Cell. Upon proceeding to the study of the corpuscle to which reference has been made, Pasteur could at first discover no way in which the multiplication of it was accomplished. Ultimately he learned that this corpuscle seen by Cornalia, and so conspicuous in worms dead of pebrine, was inactive, effete. It was not the living cell occasioning the disease, but only the formed material of such cell. That it was an effete organism incapaple of reproduction, or of inoculating pebrine, was fully established by unsuccessful attempts to inoculate worms with the old dust of infected breeding houses, with the debris of worms one year dead, and with corpuscles washed from the surface of eggs known to be corpuscular.

Pasteur subsequently discovered the young cellule from which through varied changes the adult corpuscle sprang. These cellules when just detectable seemed to have two forms, both very small, pale and indistinct, at first homogeneous and finally exhibiting vacuoles, and contained nucleated granules, which, after splitting into lesser segments developed into corpuscles. In their long diameters, the disease-cells measured one ten-thousandth of an inch.

Of the natural history of the noxious corpuscle, its nidus or habitat, nothing more is known than that it was first observed by Leydig in 1853, in the fluids and tissues of the cochineal insect, of spiders and crawfish. Where it more naturally belongs, and what causes may lead to its more frequent appearance in silk worms, are alike unknown.

The development and growth of the corpuscle in the worm was studied by poisoning a brood by sprinkling a mixture obtained by triturating a corpuscular moth in a mortar with a

little water. On the fifth or sixth day of the poisoning, cellules began to appear in the intestinal walls, remaining isolated therein for five or six days and finally aggregating into masses in all of the organs. The ingested corpuscles soon manifested their effects on the skin. Two or three days after the appearance of the cellules in the walls of the intestines, and before they were elsewhere discoverable, spots appeared on the integument, at first very minute, but becoming quite distinct on the tenth or twelfth day of infection. The appearance of these spots prior to the general invasion of the skin, was considered by Pasteur as remarkable.

The disease is *inoculable.* By mixing corpuscular worm tissue with a little water, and inoculating sound insects with the virus, poisoning results. Accidental inoculation is one of the modes in which the disease is conveyed. Pasteur noted on the bodies of worms very minute wounds, some of these were incised, others were more in the form of ulcers resembling finally the true pebrine spot. Upon careful observation he noted that the simple wounds so generally seen on the skin were inflicted by the claws of the insects as they crowded one over the other in their baskets. The spots having the appearance of ulcerations, were inoculated incisions. The hooks with which the fore feet of the insect are provided, have on their inferior surface a concavity. Washing out these minute receptacles for dirt, and placing the contents under the microscope, pebrine cells were detected. Numerous facts demonstrate the disease to be *infectious.* Thus, if in a contaminated worm house an education of healthy insects be placed under ordinary circumstances, it will be infected sooner or later. The disease in such instances may be carried from the sick to the healthy by the person of the attendant, or the cell may be conveyed by the air. For the most part under the circumstances of exposure just cited, Pasteur is of the opinion that the disease is conveyed by the contact of attendants. For experiment shows that a healthy education may be reared near an unhealthy one and remain pure, or nearly so, provided that the greatest pains be taken that no direct con-

vection of contagious particles shall take place between the infected and the well.

It would seem that the distances to which the disease may be carried by the air from a contaminated education is less than might be supposed, it being practically possible to preserve worms for industrial purpose free enough from pebrine, when separated from moderate foci of infection 30 yards. Pasteur thinks the instances must be rare in which the disease is extensively communicated by leaves holding on their surfaces the pebrine corpuscles. Cases in which such a source of contagion has been thought to exist, could more naturally be referred to convection through human intercourse. And yet, as a single corpuscle is sufficient to ingraft the disease, Pasteur is of the opinion that a distance of 30 miles should, when possible, be placed between badly infected districts and worm houses which it is proposed to keep pure.

The *heredity* of the disease is as well established as its contagion and infection. Numerous experiments have demonstrated that in the very great majority of cases, the eggs, the progenitor of which, whether in the larva, chrysalis or butterfly state, contained corpuscles, would give issue to infected worms. Sometimes a moth, containing comparatively few corpuscles, may have begotten eggs, some or all of which are free from corpuscles. In such a chrysalis and miller, the tissues of which are but sparsely infused with corpuscles, it may be supposed that by chance no pebrine cell had found its nidus in the ovary. In the eggs of unhealthy worms, corpuscles, in all stages of growth, were found in great numbers. Sometimes, however, in the ovum, as in other tissues, in the earliest periods of the existence of the pebrine cells, they were too small and pale to be visible, and it was in some instances only after considerable time had elapsed, sufficient to allow of the growth of the cells to visibility, that they could be detected. Pasteur inclined to believe that the diseased cell was inherited from the female only. Copulation of a healthy female with an infected male did not, in his limited experiments, result in infection of the eggs, and yet, feeling that his observations were too few to decide the question of transmission through

the male, he recommends, in his process for procuring perfect grain, that lots impregnated by very corpuscular males should be avoided.

Numerous carefully conducted experiments demonstrated that the cellule, at least when exposed for some time to temperature, moisture, etc., lost its vitality. Thus it was impossible to inoculate pebrine from corpuscular matter taken from the infected worms or moths of the previous season, or from the last year's dust of the breeding houses. In fact, an experiment showed that inoculation was unsuccessful when performed with germs from a corpuscular worm which had died six weeks before, and had dried in the air. On the contrary, infection was successfully effected when the virus was obtained from worms dead a few weeks, and not mummified.

Enclosed in the protecting shell of the egg, cellules preserve their infecting power from year to year, and there is reason to believe that germs encased within the crust of the chrysalis have retained their potency as long as four years. It has been stated that during the lethargic condition of the worm at the moultings it was feeble and especially liable to disease. During these periods the development and growth of the germ-cells were noticed to be particularly active. A high temperature seemed also to favor their increase.

It will be well here to comment on two erroneous impressions of many sericulturists; the one that the pebrine is not contagious, the other that it is local, pertaining to certain districts, as infected centers. The gentle, gradual advance of the malady, so that an infected worm may yet form its chrysalis, and this its moth, and this beget its progeny before the disease breaks out in virulence, has led observers, overlooking the steps by which the real cause of the infection has advanced, to regard the actual outbreak of the disorder as an epizooty, as the initial period of the attack. And in the absence of any apparent source of immediate contagion the existence of infection is denied, and the conclusion is reached that the disease can only be referred to an all pervading miasm.

It has been stated that worm tissue containing cellules ex-

posed to atmospheric changes for as long a period as six weeks, lost its power of infecting with pebrine. It is a remarkable fact, however, that it is still because of the contained mature corpuscle, highly poisonous, and if it be introduced into the alimentary canal of worms, however old it may have become, it gives rise to a disease fatal within two or three days. This disease, long known to silk growers as *flacherie*, appears to be due to the development of vibrios in the intestinal canal, begetting fermentation in the ingested food, and destroying the worm by inanition.

The *diagnosis* of pebrine is easy and certain, the only essential evidence of the existence of the disease is the presence of its corpuscle; cells very young and in the nascent state are probably invisible to the highest powers. At the very early period of the disease, before the germ cells are well developed, their existence might be overlooked; it is desirable therefore to allow time for their growth before a diagnosis is made. Thus, in the newly formed chrysalis, of the very slightly infected worm, no corpuscles may be found; but in one week or a fortnight they may be plainly seen. And in the freshly laid eggs no signs of disease may be detected, but in a few weeks or months the grain may be found to be very corpuscular. The adult corpuscle, though not the cause of disease, is the sign of the probable presence of that cause; it may therefore be depended upon as a means of diagnosis.

TREATMENT.—Of the various remedies tried for the prevention or cure of the pebrine, no one was in any way efficacious. These facts only are worthy of record: Water saturated with carbolic acid kills the germs, but fumigation with this acid was worse than useless. Chlorine fumigations prove destructive to the cells; but it is not stated whether the presence of chlorine in sufficient quantity for this result is compatible with the life of the worm itself.

Hygiene. The hygiene of this disease is as satisfactory as the treatment is discouraging. It has reference to the surroundings of the worms, and more paticularly to their parentage.

It is of the first importance that the parentage should be

perfect, or nearly so. Before the investigations of Pasteur it was the practice of silk raisers to select the best appearing cocoons from which to obtain the butterfly for the deposit of the eggs, as the seed for the next harvest. Pasteur recommended that a large number of female moths, say 50 or 100, taken from lots which it is desired to use for grain, should be carefully examined, and if they be free from corpuscles, the eggs produced by broods from which they have been selected may be used with every confidence of a successful result. His plan is to take one or two millers at a time, of those to be tested, and triturate them in a mortar containing a few drops of water. Portions of the resulting mass are subjected to the microscope and the presence or absence of corpuscles determined. When it is desirable to be very particular, both the female and male progenitors of the eggs in question are submitted to examination in the manner stated, and if a single corpuscle be discovered their eggs are rejected. On the contrary, if the scarcity of seed grain is great, or no millers perfectly free from corpuscles can be had, the product of butterflies, ten per cent. of which are moderately corpuscular, may be used for reproduction. For experience has shown that when the infection of the ascendants is not marked it is possible for the eggs to produce worms sufficiently healthy for industrial purposes, because, in cases of slight infection of the parents, such is the slowness of development of the corpuscle, that a perfect cocoon may be formed before the destructive power of the cell has accumulated.

Having secured eggs free from germs of disease, it is essential to preserve the worms hatched therefrom from all infecting influences. The corpuscles, we have seen, may be conveyed to sound worms by the air from neighboring breeding houses, or by the attendant upon infected broods. The healthy lot then should be kept at a distance from the infected one, and there should be no communication by person or utensil between them.

As the corpuscles abound in the dejections of the worms, these should be frequently removed and destroyed, and care should be taken especially that the leaves fed to the worms

be not soiled by the evacuations. Over crowding should be avoided for obvious reasons, namely: the greater the multitude of worms the greater is the chance of the presence of corpuscles, and the greater is the probability that the diseased germs may in some way be received in some one member of the same basket or worm house by ingestion or inoculation. Inasmuch as the corpuscles of the preceding year, resting as dust on the tables, floors, etc., of the breeding rooms, though inert as to pebrine, are yet poisonous, it is essential that in the beginning of the season the houses should be thoroughly cleansed and disinfected, and that thereafter dust should be removed regularly, and that by a mopping rather than a sweeping process.

REMARKS.—The pebrine in its symptoms and termination finds no exact analogue in disorders of man, and yet its resemblance to several diseases would occur to all. In its fatality, heredity, and in its capability of inoculation, as well as in the manner in which it invades the tissues, as the silk glands, it is suggestive of phthisis. Such a comparison implies that the gray granulations of Bayle are masses of cells, and formed material of cells.

In its inoculability, its gravity, its transmissibility from mother to offspring, as also in its deposits and surface manifestations, it resembles syphilis.

The plague, with its contagion, infection and deadly character, with its adventitious deposits, its carbuncles, gangrenous patches, petechial ecchymoses and serous effusions, would appear much to resemble the devasting pebrine of France.

In several of its features the history of pebrine suggests the possibility that the poison of small pox, typhoid fever and glanders may be found to depend upon the invasion of the human tissues by a cell growth heterologous and parasitic.

In regard to tubercle, while its main forms are but an aggregation of corpuscles, or as Dr. Fox says, "a growth of densely massed small cells," even more like those of pebrine than the growths of syphilis, yet, in view of the recent pathology which tends to remove from the tubercle all specific characters,

and to class its products with those of inflammation of lymphatic tissue, some may deem the comparison of it to a disease produced by the growth of a foreign cell in the tissues hardly allowable. But I need hardly remind gentlemen who have read the discussion on tubercle before the Pathological Society of London a few years since, by such men as Wilson Fox, Beale, Bastian, and their colleagues, that the question of the nature of tubercle is yet *sub judice*. Allow me here to cite some expressions of Beale in the discussion referred to. He said: "I cannot think that tubercle corpuscle has anything to do with the lymph corpuscle or with the cells of adenoid tissue. Nor do I understand how any process that may be denominated irritation can convert one of these lymphatic corpuscles into tubercle. It seems to me that tubercle consists of living matter, having the power of multiplication, and differing greatly from any cell in the body. The tubercle corpuscle is a special thing."

In his book on disease germs, Dr. Beale writes: "There is reason to think that particles of living, growing tubercle exist sufficiently minute to be supported by the atmosphere, and carried long distances. There are many facts, considered by some sufficiently conclusive, to justify the opinion that tubercular disease of the lung is, at least in some instances, contagious. If a particle of fluid holding living tubercle germs in suspension were introduced by inoculation into a weakly organism, the disease might be produced. From collections of tubercles bioplasts may be readily detached, and might be carried to distant parts and grow there." I may add in connection with this comparison of pebrine and phthisis two interesting statements as to the propagation of the latter disease. Lænnec states that having lacerated his hand with a saw while examining a body dead of phthisis, an inoculation followed which resulted in the growth of a tubercular nodule at the place of injury, which was enucleated. Dr. Jacobi reports that his dog, having been allowed to eat the sputa of a phthisical patient, died presently of consumption. I desire here to suggest that the true tubercle cell may first exist, like the pebrine cell, as a nascent, almost or quite invisible, cellule, then as a matured

cell, and finally, having undergone tyrosis, as a yellow tubercle. The supposition that tubercle cellules may exist and grow at the expense and to the injury of the lung, without appearing as a collection of mature formed material corpuscles, would explain the view insisted on by Niemeyer, that patients die of phthisis in whose lungs no tubercles are discoverable.

In this connection it is interesting to bear in mind the following statement of Dr. Crisp: "He had met with tubercle in more than one hundred different species of animals, quadrupeds, birds and reptiles. In 1854 there was a great mortality among the sparrows of Regent's Park gardens. He examined many of these, and found the livers, spleens and intestines tuberculous; these birds fed with a large number of tuberculous animals. Reptiles in confinement are very subject to tubercle in the liver, intestines, spleens and lungs; large masses often block up the alimentary canal. He had observed four stages of the disease: the first the hyperæmic, congestive or inflammatory (query, the stage of growth of cellules?); secondly, the deposit of cell growth; the third that of softening; fourth, that of cretaceous change. Vegetable feeders, as birds, are more liable to tubercle. It is hereditary, and he believed, in the lower animals contagious."

The resemblance of pebrine in its pathological histology to syphilis is quite close. The induration of chancre and the gummata of syphilis are but infiltrations of connective tissue by small cells, not dissimilar to those of pebrine, and these cells readily admitted to be heterologous and specific.

The phenomena of contagion and infection, as observed in the silk worm epidemic, are so similar to those of diseases in higher animals that it is hardly necessary to comment upon them. Two facts, however, invite our attention: one, that while under exposure the germ cell loses its vitality; under other conditions of protection it retains it for years, and possibly indefinitely. The other fact, as remarkable as suggestive, is that the mature old cells of pebrine, while they are incapable when inoculated or ingested of reproducing the original disorder, yet beget another most destructive, contagious and infectious distemper. Can it be possible that in the human

subject a disease as the scarlet fever, or chancre, may have for its cause a germ, which when modified by age or other circumstance, may produce another form of illness, as the diphtheria or chancroid? Yet another item of interest may be found in the discovery of Pasteur, that silk worm moths preserved in museums since 1838 contained pebrine corpuscles, not to be distinguished by the sight from recent ones. What possibilities in the way of storing up of germs of contagion does this not suggest! As the living seed of grain may be preserved in the mummies of Egypt for thousands of years, so may it be possible that suitable containers may serve, like the box of Pandora, to transmit distempers from generation to generation.

The detection of the cell germ in the egg as the determining cause of disease in the descendant, is explanatory of the mode of transmission of ailments from parent to offspring. The fact that some moths not very corpuscular beget healthy worms is also of interest, as confirming the observation that a syphilitic mother *may* give birth to a healthy child. According to Pasteur's observations, when ten per cent. of the moths of a given lot of worms were corpuscular, not more than two per cent. of the eggs of this lot would prove to have been contaminated.

I call attention to the excellent illustration of incubation which the history of the pebrine cell furnishes. Very slowly the germ of disease increases to such numbers as to interfere with the functions of the insect. It is noteworthy also that the rate at which this increase occurs is affected by temperature, and by certain favoring states of the worm. Multiplication being more rapid at high temperatures, and during those periods of the life of the insect when it is most feeble.

The phenomenon of latency is also admirably illustrated. Incased in the shell of the egg, and probably also in the sheath of the chrysalis, the corpuscle may lie dormant in the tissues, till an event, as the full development of the larva or pupa, excites it into activity.

The cell germ is regarded by all who have studied it as vegetable. We see virus from one animal inducing disease, as

vaccinia, when inoculated into another. In this instance the contagioning atom is probably an animal structure. Leydig has discovered in certain insects, other than the silk worm, cells apparently identical with the pebrine corpuscle. These, the discoverer believes, belong to the normal cell-structure of those insects. Now may it not be possible that the corpuscle so noxious to the Bombyx Mori may be a healthy cell of the spider, cochineal insect, or crawfish? In other words, may not a cellule normal to one organization prove the source of disease to an animal of a different class, by preying as a parasite upon its tissues? And may not such a possibility serve to explain the production in one animal of a tuberculoid disease simply by the inoculation of the products of inflammation from another animal?

I desire particularly to invite your notice to the statement of Pasteur, that in the very early origin of the cell they are invisible, and when first seen they are very pale, indefinite in outline, and barely distinguishable. Leydig confirms this observation, and it is exactly in accordance with my own experience in the study of the extremely minute atom associated, as I believe, with ague. We may adduce from this fact a lesson in reference to *post-mortem* diagnosis, namely, that tissues may be invaded with germ cells of disease in such numbers as probably to destroy life, and yet be invisible to very high powers of the microscope. In view of such a possibility, it is wise to subject specimens to examination at different intervals of time, so as to allow opportunity for the growth of any infinitely minute disease cells to visibility. And finally, an abnormal cell or atom discovered in a tissue is not to be regarded as having been always inert, because experiment shows it to be, in the state in which it was found, incompetent to produce disease. For the cell so experimented with may, like the mature pebrine cells, be no longer capable of reproduction, and in the phase of life in which it was found prove entirely inactive; whereas, at an earlier period, it may have been capable of the most destructive mischief. In short, the pathologist must not mistake formed material for the living

cell, lest, finding the former inert, he may erroneously deny potency to the latter.

The physician will do well to note that the efficiency of measures taken by Pasteur to prevent infection, namely, the removal of dead worms, the clearing away and destruction of the dejections. The avoidance of too close proximity to diseased localities, and the prevention of indirect communication between the sick and well, cannot but add some corroboration to the germ theory of such diseases as the cholera, for the prevention of which experience has taught the wisdom of exactly similar hygienic rules.

Observe also the direction to protect the food of the worm from the contagioning atom. The fact of the entrance of the multiplying pebrine cell through the alimentary canal may tend to deepen the growing impression that milk may be a vehicle of contagion.

A sarcastic reference of Cornalia to the "copious and useless pharmacopœia of the silk worm as extensive as that of man," cannot but remind the practitioner of the random application of means so often made to diseases of the human subject, the causes of which are probably as little within the reach of such medication as was the cell of pebrine to the multiform remedies vainly prescribed against it.

THE MORTALITY OF SURGICAL OPERATIONS IN THE UPPER LAKE STATES, COMPARED WITH THAT OF OTHER REGIONS.

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(Concluded.)

OVARIOTOMY.

My records of this operation are mostly from Prof. Byford, and Dr. Dunlap, of Springfield, Ohio.

TABLE XVI.

CASES OF OVARIOTOMY PERFORMED BY PROF. W. H. BYFORD.

My first twenty-five operations were performed before the Great Fire, and the notes of them were burned up; the most I can say of them was that the proportion of recoveries was 66⅔ per cent. One of these cases was in the Hospital for Women and Children, and recovered without any bad symptoms. My next thirteen cases are as follows:

Age.	DURATION OF TUMOR.	SIZE AND DESCRIPTION OF TUMOR.	MARRI'D OR SINGLE.	GENERAL CONDITION BEFORE OPERATION.	MODE OR PECULIARITY OF OPERATION.	RESULT.	TIME TO DEATH OR RECOVERY.	PRACTICE.
36	3 years	Wt. 37 lbs. Multilocular. Right ovary. Contents of main sac thick as jelly	Married.	Greatly impaired	Secured pedicle with ligature left in wound	Recovered.	3 weeks	Private
31	14 months.	Multilocular. 28 lbs.	Married.	Greatly impaired	Right ovary seat of tumor; left diseased and remov'd	Recovered.	6 weeks	
32	6 years	Both ovaries diseased alike. Two ovarian tumors weighing 20 lbs.	Single.	Greatly impaired	Both ovaries removed	Recovered.	2 months	Hospit.
42	7 months	Two large tumors, one springing from each ovary. Weight, 28 lbs.	Single.	Greatly impaired	Both ovaries removed	Died	21 days	Private
31	9 months	Dermoid tumor, weighing 25 lbs. Left ovary.	Married.	Health poor		Recovered.	3 weeks	Private
33	1 year	Multilocular of right ovary. Left so diseased as to require removal. Weight, 37 lbs.	Married.	Health good		Recovered.	5 weeks	
23	1 year	Multilocular. 34 lbs.	Single.	V ry much impar		Recovered.	3 weeks	
36	7 years	Multilocular. 28 lbs.	Married.	Very much impar		Died	14 days	
18	18 months.	Dermoid cyst. 27 lbs	Single.	Health good		Recovered.	2 weeks	
24	9 years	Multilocular. 30 lbs.	Single.	Very much impar		Recovered.	2 months	
24	17 months.	Multilocular. 15 lbs.	Married.	Very much impar		Recovered.	2 weeks	
43	11 months.	Dermoid. 30 lbs.	Married.	Good condition		Recovered.	4 weeks	
27	3 years	Multilocular. 45 lbs.	Married.	Emaciated		Recovered.	6 weeks	

In addition to the above I have accounts of 118 cases, of which 34 died, operated on by the following surgeons, viz.: Dr. Dunlap, of Springfield, Ohio, and Drs. E. Andrews, J. Andrews, D. Brainard, Brauns, A. Fisher, J. M. Hutchinson, A. R. Jackson and E. O. F. Roler.

RECAPITULATION.

AUTHORITIES.	CASES.	DIED.
Byford's operations before the great fire (notes burned up)	25	8
Byford's operations since	13	2
Dunlap's operations	107	26
Other Lake State operators	11	8
Total Lake States cases	156	44

Mortality in the Lake States, 28 per cent.

OVARIOTOMY ABROAD.

AUTHORITIES.	CASES.	DIED.
W. L. Atlee, Philadelphia	350	105
Prof. Peaslee, N. Y.	28	9
Dr. G. Kimball, of Lowell, Mass.	203	67
Spencer Wells, of England, 1876	500	127
Dr. Clay, of Eng., quoted in Peaslee on Ov. Tum., p. 248	250	68
Dr. Keith of Scotland, " " " "	136	25
Thomas " " " "	27	9
Bradford " " " "	30	3
Dr. Cheever, of Boston	4	4
Bryant (Trans. Obst. Soc., London, 1865)	10	4
Tyler Smith, " " "	20	5
St. Thomas' Hosp.	3	1
St. Bartholomew's Hosp	23	17
St. George's Hosp.	5	4
Grimsdale, quoted Arch. klin. Chir. Bd. 8, S. 813	10	3
Cases in Germany, Russia, Switzerland, Italy, Spain, Australia and India, Arch. klin. Chir. Bd. 8	35	15
K. k. allg. Krankenhaus, Wien	25	17
Roosevelt Hosp.	1	1
Totals	1660	484

Mortality, 29 per cent.

GENERAL SUMMARY.

	CASES.	DIED.	PER CENT. MORTLI'Y.
Lake States	156	44	28
Abroad	1660	484	29

OPINIONS OF AUTHORS.

In the treatment of ovarian cysts two operations have to be considered, viz.: Tapping and ovariotomy. On these points Prof. W. H. Byford, of Chicago, has favored me with the following opinions:

"TAPPING."

"Tapping an ovarian tumor is always attended with danger, and ought not to be resorted to without important reasons. This operation is especially hazardous in the polycystic variety.

"It is allowable in monocysts, when the diagnosis is doubtful, for the purpose of deciding the nature of the fluctuating mass.

"When the collection of fluid is very great and the patient in an exhausted condition, by evacuating it the patient will generally recruit under proper treatment. She will then bear ovariotomy better.

"If for any reason ovariotomy is impracticable, we may often palliate the suffering and prolong the life of the patient by tapping one or more times, as the case may require.

"Again, there is another condition, not very rare, in which tapping may be relied upon as curative, *i. e.*, when the vitality of the tumor is decreasing. This condition is more frequently observed in patients somewhat advanced in years, and is recognizable by what I would denominate tentative tapping, or the history of the case connected with this operation. If after several evacuations the length of time in which the tumor fills up is increasing, we may expect by repetition of the operations the vitality of the growth will be exhausted and eventually will not fill again. I have seen two remark-

able instances of this kind, in which the patients recovered after they had been tapped a number of times."

"INDICATIONS FOR OVARIOTOMY."

"We are justified in the performance of ovariotomy only when the patient's health is becoming impaired in consequence of the presence of the tumor. This will occur when it is large enough to press mischievously upon the vital organs. Of course other indications, under special circumstances, may determine the propriety of the operation, but it would not be expedient here to enter upon the consideration of them, as it would require too much space.

"Ovariotomy should not be thought of until the diagnosis is so clearly demonstrated as to leave no doubt in the mind of the operator."

Mr. Bryant, surgeon to Guy's hospital, thinks that tapping should be omitted in the majority of cases, unless needed for the purpose of diagnosis. Spencer Wells, however, whose vast experience gives weight to his opinion, thinks that previous tapping does not materially affect the safety of a subsequent ovariotomy.

Mr. Bryant thinks that ovariotomy should be performed in almost all cases of benign polycystic ovarian tumor, except when the patient's health is so broken down as to render it nearly certain that she will not bear the operation. As to the time to be selected he thinks ovariotomy should not be thought of until the health of the patient begins to suffer seriously from the growth of the tumor.

Jonathan Hutchinson discourages mere tapping, but speaks favorably of injections of iodine in the few unilocular cases. He favors ovariotomy strongly in proper cases, and reckons the risk at about 33 per cent.

Spencer Wells, and all the other great ovariotomists, of course favor the operation in proper cases, and it is scarcely worth while to quote against their decisive authority the crude objections of less experienced men in the earlier years of the discussion of this subject.

CONCLUSIONS.

The mortality of this operation, in the Lake States, has been 28 per cent. for all cases collected by me, but only 26 per cent. in the hands of Prof. Byford. Abroad the mortality has been 29 per cent., but grows somewhat less as skill and experience accumulate. The operation has been safer in Great Britain than on the continent of Europe.

It is a grave operation and never to be undertaken except after full investigation of each case, but there is no doubt that it is firmly established as one of the great operations of surgery. As remarked by Prof. Byford, it ought not to be performed until the patient's health begins to suffer from the pressure of the tumor, and a very careful investigation of all the conditions of the case should be made before decision; and then, if it is found that no insuperable obstacle exists, the operation is to be positively recommended, for after the tumor begins to interfere with the functions of vital organs, the short and miserable remnant of a life, without an operation, may rationally be risked for two chances out of three for a permanent cure.

With regard to tapping the tumor, nothing better can be said than the judicious words of Prof. Byford, quoted above under the head of "Opinions of Authors."

TRANSFUSION.

This operation has been performed in the Lake States but few times, so far as I can learn. The records are very imperfect, but some interesting observations have been made. Prof. Freer and Prof. E. Andrews have transfused for hæmorrhage in eight or ten cases. Prof. Freer's cases were the most numerous of the two, and one of them was so greatly improved as to give the highest hopes of recovery, when the patient suddenly died with symptoms of embolism. None of the cases of either operator finally recovered. Dr. Hotz transfused one case of hæmorrhage with lamb's blood, with the result of saving the patient. Dr. Hotz, together with Dr. Prœgler and Dr. Wild, transfused, with lamb's blood, in eight cases of phthisis and anæmia. One was temporarily improved

and one died of the effects of the operation. Dr. Hotz is of the opinion that the operation should be limited to cases of recent hæmorrhage, but Prof. Freer is disposed to think that if Dr. H. had repeated the transfusion some of the failures might have been transformed into successes.

Prof. Freer has experimented largely on dogs, and from his observations concludes that the transfusion of defibrinated blood is the most successful plan.

Abroad the operation, if honestly quoted, has been more successful. Laudois gives 96 finished cases, of which only 31 died, being a mortality of 32 per cent.

The opinions of authors on this operation are generally expressed in rather vague terms, but for the most part they favor it for desperate hæmorrhage.

Gross, Freer, Ashurst, Moore, of England, Blundell and others favor it decidedly. Freer and Ashurst prefer defibrinated blood.

CONCLUSIONS.

The literature of transfusion is still in a very crude condition. My opinion is, however, that in cases of dangerous hæmorrhage it is an important resource, and that it is best performed with defibrinated blood. I think the ill success which has attended it in the Lake States is due to the reluctance of surgeons to undertake it promptly, and to the consequent fact that the patients were generally too far gone for recovery.

MISCELLANEOUS OPERATIONS IN THE LAKE STATES.

The following list contains a number of scattered cases recorded by myself and others worthy, perhaps, of notice, but not numerous enough to be tabulated in detail:

OPERATIONS.	CASES.	FAILED	DIED.
Trephining for frac of skull	10	0	3
" for insanity after fracture	2	1	1
" for idiopathic insanity	2	2	0
" for epilepsy (permanancy of successes not known)	7	1	1
Ligation of common carotid artery for traumatic hæmorrhage	1	0	0
Ligation com. carotid for vascular tumor of orbit	1	0	0
Ligation of brachial art. for traumatic aneurism	1	0	0
Ligation of common iliac art. for aneurism of aorta	1	0	1
Ligation ext. iliac for traumatic aneurism	1	0	0
Ligation of ext. iliac for aneurism of femeral	1	0	0
Ligation of femeral for wounds	3	0	0
" " " aneurism	2	1	0
Compression of arteries for aneurism*	6	4	
Stricture of uretha treated by internal section*	24	1	0
" " " divulsion*	15	2	0
" " " external perin sect.*	2	0	0
" " " gradual dilatation*	50	0	0
Operations for hæmorrhoids*	45	0	0
Forcible rupture of anchylosis†	8	3	1
Operations for ununited fracture*	24	1	0
Stretching sciatic nerve for neuralgia (Nussbaum's operation)	2	0	0
Neurotomy	8	0	0

* Records very imperfect.
† Three of the successes were imperfect.

For convenience of reference to those who wish to see at a glance what the experience of the world has been with regard to the principal operations, the following table is prepared:

TABLE XVII.

MORTALITY OF THE PRINCIPAL OPERATIONS.

CASES.	PER CENT. LAKE STATES.	PER CT. ABROAD.
Amputation at shoulder joint, primary		35
" " " second. and inter. comb.		48
" " " pathological		29
" " " average of all cases	30	39
" arm, primary	20	27
" " intermediary and second. combin.		36
" " pathological		20
" " average of all cases	11	35
" elbow joint, average of all cases		21
" forearm, primary		11
" " intermediary		23
" " secondary		16

TABLE XVII.—Continued.

Amputation at forearm, pathological		22
" " average of all cases	10	16
" wrist, primary		8
" " intermediary		14
" " secondary		20
" " pathological		7
" " average of all cases		18
" hip joint, primary		99
" " " intermediary		92
" " " secondary		65
" " " pathological		47
" " " average of all cases*	43	30
" upper 3d of thigh, primary	40	60
" " " " inter. and sec. comb'd		44
" " " " pathological		27
" middle " " primary		48
" " " " inter. and sec. comb'd		59
" " " " pathological		22
" lower " " primary	28	45
" " " " inter. and sec. comb'd		60
" " " " pathological		20
" average of all thigh cases	24	62
" knee joint, primary		48
" " " intermediary and sec. comb'd		49
" " " pathological		26
" " " details not stated		54
" leg, upper 3d, primary		36
" " " " intermed. and sec'y comb'd		47
" " " " pathological		31
" " " " average of all cases	36	37
" " middle " primary		45
" " " " intermed. and secondary		44
" " " " pathological†		6
" " " " average of all cases	25	32
" " lower " primary		37
" " " " intermed. and sec'y comb'd		29
" " " " pathological		16
" " average of all cases	13	
" " average of all times and locations	23	40
" ankle, Syme's		9
" " Pirogoff's	22	18
" foot, Chopart's		16
Resection, shoulder, primary		30
" " intermediary		46
" " intermed. and second. together		37
" " pathological		19
" " average of all cases		32
" elbow, primary		22
" " intermediary		35
" " intermed. and second. combined		28
" " secondary, alone		9
" " pathological		12
" wrist, average of all cases		19
" hip, primary		92
" " intermediary		91

* This per cent. in the Lake States was derived from only seven cases. It cannot be expected to continue so low in the future.

† Derived from forty-nine cases. Mortality accidentally low.

TABLE XVII.—Continued.

Resection, hip, intermed. and second. combined		71
" " secondary		85
" " pathological	42	46
" knee, all traumatic combined		85
" " pathological	37	29
" ankle, all traumatic combined		13
" " pathological	11	12
Herniotomy	24	49
Hernia, radical cure operations		4
Lithotomy, 1 to 5 years		7
" 5 to 11 years		4
" 11 to 16 years		11
" 16 to 20 years		14
" 20 to 30 years		13
" 30 to 38 years		9
" 38 to 48 years		17
" 48 to 58 years		21
" 58 to 70 years		27
" 70 to 80 years		32
" average under puberty		7
" " over "	38	19
" " all ages combined	23	16
Lithotrity		9
Tracheotomy and laryngotomy for diphtheria & croup,		
Under 2 years		100
2 to 3 years		73
3 to 4 years		68
4 to 5 years		76
5 to 6 years		65
6 to 7 years		55
7 to 8 years		76
8 to 14 years		58
All ages together	81	63
Tracheotomy and laryngotomy for œdema glottidis	25	26
" " for foreign bodies		25
Œsophagotomy		24
Ovariotomy	28	29
Transfusion for hæmorrhage		32
Ligation of the aorta		100
" common iliac artery		76
" internal " "		58
" external " "		43
" femoral " "		34
" profun. femoris "		62
" popliteal "		76
" arteries of leg and foot		50
" innominata artery		94
" common carotid "		45
" internal " "		12
" subclavian "		55
" axillary "		75
" brachial "		19
" radial and ulnar "		15
Trephining for fracture of cranium		50
" for epilepsy		58
Colotomy		44
Gastrotomy for stricture, foreign bodies, etc.		58
Extraction of loose cartilages from the knee		20

I have in this unusually prolonged article endeavored to give a condensed view of the statistics and opinions of the world, on every principal operation in surgery. It has been a work of immense labor, but yet a very necessary one, for the contradictions of authors and the very frequent hastiness and superficiality displayed in writings of recognized authority render it almost impossible for the practical surgeon to distinguish truth from error.

I return my thanks to those gentlemen who have contributed their cases for the Lake States lists, and their names will be found in the tables.

I regret that the great Chicago fire swept out of existence the records of several excellent surgeons, thus depriving me of the benefit of their extensive experience; but the cases which I did obtain have been carefully sifted and fairly represent the results of surgery in this region.

CHICAGO, No. 6 Sixteenth St., Dec. 1, 1876.

Correspondence.

SOLVENT FOR SALICYLIC ACID.

CLINTON, ILL., December, 1876.

Allow me to call your attention to the solvent alcohol for salicylic acid. The proportions are as follows:

Salicylic Acid, ...gr. 30.

Alcohol 95 per cent. .....gr. 49½ Bulk ʒ iss.

Mix. Will form a complete solution without chemical change in the above proportions. Add distilled water, gr. 60 Bulk ʒ i. It will re-crystalize the entire quantity in solution into an anhydrous mass. Weight, gr. 134—dry, 24 gr. It will readily dry on filtering paper exposed to the air, leaving the residue a beautiful needle crystal, very fine, but well defined under a high power. Other agents containing alcohol will make a solution for all practical purposes, as Spts. Lavender, Spts. Rosemary, etc.

Aqueous solutions must be studiously avoided as incompatible, while ammoniated agents are admissible with morphine and an alchoholic menstrum of opium.

Yours, D. W. EDMISTON, M.D.

THE CORN SWEAT.

I desire to call the attention of the profession to an old-fashioned, and partially forgotten remedial measure, known as the "corn sweat." In the eruptive, and other fevers, a thorough sweating or sweatings at the very inception of the disease oftentimes will have the effect to cut short the disease, or mitigate its severity. "Cures" where the "Turkish Bath" is administered, show a record in the management of fevers, that testifies abundantly to the efficiency of this plan of treatment. In private practice, this remedy is seldom given properly, and when not is discarded as worthless. The means generally used to bring about a profuse perspiration, are either insufficient, or so complicated or inconvenient as to be seldom brought into use. One of the means usually adopted, is packing in bedclothes and hot bottles or bricks. This is very good, but falls short in a majority of cases, of producing a decided effect. The process I am to describe is very simple. Have the apartment warm; boil fifteen ears of corn in a kettle. Warm five blankets and place them one above another on a bed. Put the patient, undressed, on the blankets and wrap two of them around him, not both at once, but one after the other.

Now quickly dry the boiling ears with a towel, place them all about the patient, and wrap the remaining three blankets one by one around him, well up under the chin. Adults and older children, should be kept in the sweat three-quarters of an hour to an hour. Children of three to six years, half an hour. After profuse perspiration, the whole or a part of the corn may be taken away, after which the blankets may be removed, one by one, at intervals of a few minutes. The last one should remain until the surface of the body is quite dry, after which the patient should be put into a warm bed.

I believe if this plan is strictly followed there is no danger of "taking cold." Care should be taken during the bath that the blankets be well wrapped around the neck. Patients will almost inevitably endeavor to get some air from this quarter. The bath as thus administered has been extremely useful in my hands. I had two cases of typhoid fever, one case of congestive chills, a number of cases of ordinary ague, two cases of pneumonia, two cases of dropsy, etc., that were benefitted by the "corn sweat."

FRANK ALLPORT, M.D.

Sycamore, Ill.

Book Reviews.

[NOTE.—All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER may be found in the extensive stock of W. B. KEEN, COOKE & Co, whose Catalogue of Medical Books will be sent to any address upon request.]

DISEASES OF THE NOSE AND ITS ACCESSORY CAVITIES. By *W. Spencer Watson, F.R.C.S., Eng., B.M. Lond., etc.* London: H. K. Lewis.

This book originated in the hope, says the author, "that by condensing and systematizing the vast mass of material" relating to affections of the nose, which is scattered through the literature of medicine, a certain void might be filled up, and the busy practitioner afforded a real help. He is right in this that in the systematic works on general surgery and medicine the disorders of the nose receive but slight attention. Such a book as the one before us is very much needed by the profession. In many ways the work is an excellent one. The author has freely drawn upon a great array of literature upon the subject, and his work doubtless is a fair presentation of much that is best in this literature. But we think the average doctor will be disappointed in the book, from the brevity of those sections devoted to some of the commoner forms of disorders with which he is often perplexed, and the fullness with

which those affections are treated of which he very seldom even sees. At the same time some of the treatment recommended for the more common affections will meet with criticism.

The free way in which the author recommends the use of the nasal douche will not be allowed to pass unchallenged by our friends the otologists, nearly all of whom, we notice, look upon a nasal douche with only less terror than they would upon a small infernal machine.

Nevertheless, Mr. Watson's book is a good one. It contains more and better information on the subjects of which it treats than any other we know of; and to any practitioner who cares to be thorough in this department we cheerfully commend the work.

CONTRIBUTIONS TO REPARATIVE SURGERY. By *Gurdon Buck, M.D.* New York: D. Appleton & Co. 1876.

The "Reparative Surgery" of the author embraces a series of operations which he performed in the region of the face, the neck and the upper extremities, to repair the damage sustained by the loss of parts or to remove congenital malformations from excess or arrest of development, or to remedy the cicatricial contractions following burns.

The report of twenty-nine cases (some of which had previously been published in medical periodicals) occupies the greater part of the volume. The accurate description of each case; the conscientious account of every step of the operations, which in several cases numbered five and more; and a collection of good illustrations, showing in each case the original deformity and the permanent result after the lapse of long intervals of time — such features make the reading of the book very interesting and instructive. It is not within the scope of this notice to give even a brief synopsis of the cases comprising: 1, a number of hare-lips and cicatricial contractions involving the eyelids, the face, the chin, the hands and the axilla; 2, a large assortment of reconstructions of the mouth and the nose.

The general observations which precede the report of the

cases fairly represent the author's views of plastic operations. In the choice of material which is to supply an existing defect, the author justly warns not to include any cicatricial tissues in a flap, because the same if transplanted will inevitably slough. The truth of this remark is fully substantiated by Case XXVII., in which the author, deviating from his own rule, employed cicatricial skin to cover a large defect; and sure enough, after forty-eight hours sloughing had destroyed all the flaps.

In order to secure a good fit, dressmakers cut the several pieces for a dress after patterns pinned on to the cloth. Dr. B. adopts this method for plastic patch-work: "An exact pattern of the space should be cut from oiled silk, and the pattern applied to the surface which is to supply the new material. Small pins may then be temporarily inserted erect in the skin at intervals around the pattern, and at a distance of one line from its margin, as an allowance for shrinkage."

For the transfer of a portion of skin to a new locality, the author has adopted the usual three methods, viz.: by approximation, by sliding, and by transfer to a distance.

Three kinds of sutures have been employed by the author: The "interrupted thread suture," the "pin suture," and the "beaded wire clamp suture." The latter is intended as an auxiliary for the support of other sutures where it is important to relieve them of strain, and thereby increase the chances of obtaining primary union. They are inserted at a distance of one inch or more from the edges. The adjustment of the edges to each other is achieved by the interrupted sutures, which "should be inserted as closely together as may be necessary to secure exact coaptation of the edges. Their multiplicity is not objectionable, inasmuch as at the expiration of twenty-four hours, when agglutination of the edges will have taken place, their number may be diminished by removing the alternate ones."

To those who yet look upon the material used for sutures as the principal condition for a successful union, we would recommend the following remarks of the experienced writer: "Metallic sutures, in the judgment of the author, possess no

advantage over thread, and are as liable to cause ulceration as thread. Both will remain harmless as long as they are needed, provided the edges of the wound they are designed to hold in contact have previously been liberated, so as to be relieved of all strain upon them."

For the insertion of the pin suture Dr. B. has devised and described a "suture pin conductor." We hope the doctor does not love his invention so fondly as to feel aggrieved if we are free to say that the pin suture, in our judgment, is an unnecessary and cruel torture to the patient, and should be thrown aside by modern surgeons. There is no more need for pins in uniting the edges of a hare-lip than in adapting the edges of the eyelids. The modern ophthalmic surgeons employ the interrupted suture only, while Diefenbach yet thought the pin suture was indispensable in tarsorraphy. And from our own experience we are satisfied that the pins can just as safely be dispensed with in the hare-lip sutures.

In regard to the operation for hare-lips, there is another point in which we differ with the author. He exclusively employed Malgaigne's method of paring and uniting the edges of the cleft, asserting that by this method "the formation of a notch at the point of the lip border where the two halves unite is best prevented." Do the author's own results, as represented by the drawings, sustain this assertion? Four of the seven cases show a decided shortening of the lip at the point where the borders of the cleft were united. Especially the results of the operation for double hare-lip, as depicted in Fig. 46 and 56, do not speak well for Malgaigne's method. We think Mirault's operation in such cases gives far better satisfaction; it prevents more efficiently the formation of a notch, and gives greater uniformity to the height of the lip.

To regulate the process of cicatrization of a large granulating surface (as the result of the excision of cicatricial folds from burns), to repress the exuberant granulations, the author entirely relied on the frequent application of solid nitrate of silver and caustic potassa, aided by the compression with adhesive plaster, cut into strips, and applied in immediate contact with the entire granulating surface. It seems he did

not employ skin-grafting, which, just for such cases, would have been a valuable auxiliary.

It would have been very interesting to learn the author's views of the value of Reverdin's grafting, as well as of Lister's antiseptic dressing. He did not use the latter in the cases reported; but perhaps he will try it now, since Lister has been in this country to demonstrate the accurate mode of his dressing.

The illustrations in the book are very well executed, the artist having taken great pains to give an accurate copy of the photographs; they are highly interesting as truthful representations of the original deformity of each case and of the final result achieved by the reparative surgery.

The book will be read with a great deal of interest, and its pages will be frequently consulted by those who wish to receive some intelligent information in regard to plastic surgery.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE, edited by *Dr. H. von Ziemssen*, Professor of Clinical Medicine in Munich, Bavaria. Vol. XI. Diseases of the Peripheral Cerebro-Spinal Nerves, by Prof. Wilhelm Heinrich Erb, of Heidelberg, Baden. Translated by Mr. Henry Power, of London, England. Albert H. Buck, M.D., New York, editor of American edition. 8vo. pp. 623. New York: Wm. Wood & Co. 1876. For sale (by subscription only) by W. T. Keener, 93 Dearborn St., Chicago.

We have read this volume with great interest and much profit. It should be in the library of every physician. It discusses, in quite an exhaustive manner, several diseases that are of almost daily occurrence, and but little understood. It is particularly rich in etiology and pathology, but the bibliography, while it shows the author's great familiarity with the writings of his own country, displays a rather surprising want of acquaintance with those of this country, England and France. The symptomatology is very clear and generally quite exhaustive, and the treatment is fully up to the present advanced position of neurotherapy.

The author's career, like his book, has been a great success; he received his degree as doctor of medicine, in Munich, at

the age of twenty-two; at twenty-five he was installed as private instructor in Heidelberg, and first assistant of Friedreich's clinic, and at twenty-eight was made extraordinary professor. He published, prior to the book now before us, twenty important scientific papers.

He preserves the long established division of functional and anatomical diseases of the peripheral nerves, and under the former includes neuralgia, anæsthesia, neuroses of the nerves of special sense, spasm and paralysis; and under the latter hyperæmia, inflammation, atrophy and hypertrophy.

The neuralgias are discussed ably and exhaustively; 173 pages being thus occupied. While we fully endorse all he has written on the etiology of neuralgia, we do not think he has in this, or in the discussion of this important consideration in any of the neuroses, dwelt sufficiently upon immoderate and unnatural sexual indulgence as a powerful cause in the production of this as well as many of the other neuroses of the central as well as the peripheral system. It is our opinion that where the neuropathic predisposition exists there is no one cause that acts so forcibly in the production of these diseases.

Our author writes of the *painful points* of neuralgia, that the frequency of their occurrence has been considerably overestimated by Valleix. We are pleased to have him remark, as confirmation of our own observations, that "in a considerable number of cases it was impossible, even with the most conscientious care, to demonstrate their existence." While discussing the disturbances of nutrition in neuralgia, our author takes occasion to remark that a whole series of the above mentioned trophic disturbances are only explicable on the supposition that the nerves (trophic) exert a direct influence upon the nutrition of the tissues, "thus placing himself on record as a believer in the existence of special trophic nerves."

The articles on neuralgia of the fifth nerve is an excellent one. He dwells upon heredity as the foremost predisposing cause; its greater frequency in middle life and old age and in women, the effect of sexual excess, overstimulation, anæmia and general disturbance of nutrition, the advent of senescence

with fatty degeneration of the tissues and diseases of the arteries, on its development. He notices the occasional influence of malarial infection, wounds, anatomical changes in the nerves and in the brain, irritation of the peripheral nerves and excessive psychical activity in its production. The profession generally will endorse his statement that "the treatment of prosopalgia only too frequently presents extraordinary difficulties, taxing the knowledge and patience of the physician to the utmost, and in spite of all efforts giving an unsatisfactory result."

The article on paralysis in general, and the special paralysis of the facial nerve is thoroughly scientific and will well repay careful perusal. Attention is called to the three lesions that may characterize paralysis, as follows: 1st, Destruction or functional incapacity of the motor central apparatus. 2d, Diminution or abolition of the conductivity of the motor nerves; and, 3d, Abolition of excitability and contractility of the muscle.

The different degrees of vaso-motor and associated disturbances occurring in peripheral, spinal and cerebral paralysis are thus described and explained: "Paralysis of the vaso-motor nerves is of frequent occurrence, and first leads to hyperæmia with slight œdema and subsequently to general atony of the vessels, cyanosis and defective nutrition. These symptoms may be chiefly expected in those cases where the vaso-motor nerves are coincidently affected by the primary cause of the paralysis and they are almost certain to occur in cases of paralysis of peripheral nerves, where the vaso-motor nerves run in the same trunk. They are less frequent in paralysis originating in the spinal cord, because the two sets of fibres are then probably more or less widely separated. Lastly, they are seldom seen in cerebral paralysis, in which the vaso-motor nerves often remain quite intact, since in the brain the vaso-motors run more or less completely detached from the motor nerves."

Our author devotes considerable space to a consideration of the electrical examination of the paralyzed nerves and muscles, and dwells upon its importance in the pathology, and in the differential and local diagnosis. This important subject is

very satisfactorily elucidated. Under general treatment he states the truism "that the first and most important point is the determination and fulfillment of the indicated causalis."

In the article on facial paralysis there is quite an exhaustive dissertation on the importance and method of diagnosing the immediate cause and exact seat of the lesion. In the same article the indications of treatment are clearly stated, and in this, as in the treatment of functional neuroses generally, electricity is given the prominent position to which clinical experience entitles it.

Space will not permit a detailed review of the "Anatomical Diseases of the Peripheral Nerves." We find here, however, the same clearness and thoroughness that characterizes the book generally.

D. R. B.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by *Dr. H. von Ziemssen*, Professor, etc. Volume IV. Diseases of the Respiratory Organs. By Dr. Fraenkel, of Berlin; Prof. von Ziemssen, of Munich; Prof. Steiner, of Prague; Dr. Riegel, of Cologne; and Dr. Fraentzel, of Berlin. Translated by J. B. Yeo, M.D., of London; J. S. Cohen, M.D., of Philadelphia; A. B. Ball, M.D., and G. M. Lefferts, M.D., of New York; and E. W. Schauffler, M.D., of Kansas City. Albert H. Buck, M.D., of New York, Editor of American Edition. New York: Wm. Wood & Co. 1876. For sale (by subscription only) by W. T. Keener, 93 Dearborn street, Chicago.

The character of this cyclopædia is already familiar to the profession, and this volume does not differ from those which have preceded it in general arrangement and in the excellence of its print. It is divided into five sections, which are contributed by as many authors.

As a rule the subjects have been thoroughly treated; yet in some cases, the authors have almost ignored the opinions of eminent men, who differ from them, while each has elaborated at great length his own pet theory. This is hardly fair, if the work is intended to give us *all* that is known upon the subjects of which it treats; and if it is designed only as a dictionary of facts, as its name implies, it seems much too voluminous, for we are compelled to read page after page to find the facts,

which might as well be told in a single paragraph; indeed, prolixity is a prominent fault in this volume. For instance, it takes six pages to inform us how to depress the tongue, and this is a fair illustration of the tediousness of many parts of the book. Aside from these objections and an occasional labored paragraph, we can heartily commend this volume to the profession.

Fraenkel tells us, first, how to inspect the pharynx. He next gives us the history of laryngoscopy, and then describes at length the apparatus needed. Of various illuminating apparatus mentioned, he prefers for ordinary use a concave mirror, which can be attached to the head. The mirror should have a focus of six or seven inches, if we are obliged to use artificial light; but if sunlight (which he considers most desirable) can be employed, the mirror should have a focus of nine or ten inches.

After detailing the method of performing laryngoscopy, he describes the anatomy of the larynx and its image as seen in the laryngeal mirror, at the same time calling attention to the special parts to be observed in an examination, and the visible changes which may be produced in them by disease. An article on rhinoscopy follows; it is succeeded by an interesting chapter on general therapeutics in diseases of the nose, pharynx and larynx. Eighty-two pages by the same author are devoted to diseases of the nose — stenosis and atresia, coryza, purulent catarrh, chronic nasal catarrh, and epistaxis; abscesses and ulcerations, tumors and foreign bodies, and concretions and parasites of the nasal cavity.

Coryza is said to be contagious, and a not infrequent cause of facial erysipelas.

A fair idea of this chapter may be obtained from the article on nose bleed, which occupies eighteen pages. Among the causes of this affection he mentions the hæmorrhagic diathesis and increased lateral pressure in the blood vessels within the nose, induced by hindrance to the flow of blood through the veins, as in the paroxysms of whooping-cough, or by increased arterial pressure, as in hypertrophy of the heart with contraction of the kidneys.

Various infectious diseases, as measles, variola, typhus, etc., and also diseases of the spleen, may give rise to this affection. Epistaxis may become, so to speak, habitual. "It frequently appears vicariously for other hæmorrhages, especially those of a hæmorrhoidal character, or in place of menstruation." But we are cautioned about assigning a vicarious character to hæmorrhages. Habitual nose-bleed is hereditary in some families. The author says: "It is but seldom that fainting, prolonged anæmia, or even death, follows a single hæmorrhage of uncommon severity or a prolonged flow." He does not concur in the opinion held by some authors, that habitual epistaxis during youth induces pulmonary phthisis.

The treatment recommended is, first, pressure of the ala of the affected side against the septum in such a manner as to close the nostril and front part of the nose. Pressure may be made by the fingers introduced into the nostrils, or the anterior tampon may be used. When the bleeding takes place from the anterior part of the nose, as is usually the case, these means will be effectual. As an adjunct the carotid may be compressed. He has seldom seen any good to result from the use of astringent drugs during the attack; but hæmostatics may help to prevent its recurrence. In severe cases the posterior tampon must be employed.

Anæmia, hyperæmia, abnormal color and catarrhal inflammations of the larynx are treated of by von Ziemssen in forty pages.

He states that chronic laryngeal catarrh generally proceeds from an acute attack, as the result of neglect or exposure to such irritating causes as loud talking or singing. Another extremely frequent cause of this affection is chronic pharyngitis, which is especially apt to extend to the larynx when several causes co-operate, such as straining the voice and the abuse of tobacco or alcoholics.

Evidently he does not agree with those who attribute this affection in the majority of cases to phthisis.

Diseases of the trachea and bronchi are treated of by Riegel. He devotes one hundred and forty pages to bronchial catarrh, thirty-two to croupous bronchitis, thirty to stenosis of the

trachea and bronchi, twenty to foreign bodies in the trachea and bronchi, and over sixty to bronchial asthma. This article is interesting, but very diffuse.

Nearly two hundred pages are devoted to diseases of the pleura by Fraentzel. We were specially interested in his explanation of the cause of the tympanitic resonance which is commonly obtained over the apex of the pleural cavity when it is nearly filled with fluid. He thinks that the pitch of the sound heard on percussion over the lungs depends not only on the volume of air which they contain, but also on the tension of the pulmonary parenchyma. He states, with Winterich, that as the tension of the parenchyma increases the pitch becomes higher; that as it diminishes the pitch becomes lower; and that with diminution in volume of the lung the pitch becomes higher. As every pleuritic effusion compresses the lung somewhat, its volume becomes less, giving rise to *higher pitch;* but its tension also becomes less, which tends to *lower the pitch.* Therefore, if we accept the above theory, it is at once evident that if the diminution in the volume (*high pitch*) and the diminution in the tension (*low pitch*) are equally balanced, the percussion note under the clavicle will remain unaltered; but if this, as has been stated, is usually deep (*tympanitic*) in moderately large pleuritic effusions, it follows that in these cases the decrease in tension exceeds the decrease in volume. In other words, the tympanitic resonance obtained at the anterior superior portion of the affected side, in considerable pleuritic effusions, is due to a relatively greater decrease in the tension of the lung than in its volume.

This article is noticeable for the description of the author's treatment of empyema, which he has described at great length, with only a hint at the common modes of treatment. He has occasionally seen recovery followed by evacuation of the pus by means of the aspirator; therefore this operation is recommended for two or three times, if the pus withdrawn seems healthy; but if a cure does not result, or if the pus becomes unhealthy, the radical operation must be performed, to allow daily cleansing of the pleural sac.

The author's procedure is as follows: He dissects carefully down in the fourth or fifth intercostal space, somewhat external to the mammary line, until he reaches the pleura costalis, which he divides with great care. The incision made is something over two inches in length. Immediately the pleura is opened, two or three fingers are introduced into the wound to prevent too rapid escape of the pus. After the pus has escaped, the cavity is carefully washed out four or five times with distilled water. He then introduces a short silver cannula, having a circular silver plate, or flange, on its outer extremity, which rests against the chest wall, and must fit the surface accurately. The cannula must be large enough to admit two of Nélaton's medium-sized catheters; it is provided with a movable lid, which closes its orifice. A piece of *Lister's protective* is placed between the plate of the cannula and the surface of the wound. The cannula is then secured by plaster; it is covered with another piece of protective, and over this is placed a large compress of carbolized gauze, and the whole is secured by a bandage. An India rubber bag filled with ice is placed over the region of the wound, and absolute rest insisted on. The patient is compelled to lie very straight in bed to prevent curvature of the spine. Lister's carbolized spray must be used during the entire operation and dressing, and subsequently whenever the dressings are changed.

Twice every day the dressings are removed, and two of Nélaton's catheters introduced through the cannula to the lower part of the pleural cavity; through one of these water runs into the chest, and through the other it is pumped out until it comes away clear. The cannula must then be removed, carefully cleaned, and re-inserted, though this operation causes considerable pain after the wound has partially closed by granulations. The ice bag must be kept in position for two days, and distilled water used for that length of time to cleanse the cavity. Subsequently for several days a solution of common salt—gr. iiss. to ℥ i.—is employed. Afterward compound tincture of iodine, diluted with twenty to fifty parts of water; or permanganate of potassium—gr. i. to ℥ i. of water; or carbolic acid—gr. ii. to ℥ i.—may be substituted.

He teaches that the cavity becomes obliterated by granulation and adhesions of the pleural surfaces. If during the treatment the sac ceases to diminish for a few days, the solution used for washing it out must be changed. As the result of all this care and subsequent tonic and climatic treatment, five out of his eleven cases have been completely cured; but we are not told how long they were under treatment. One was discharged with an incompletely healed thoracic fistula, one had been under treatment only two weeks at the time of writing, and four had died. He compares his cases with those of Moutard-Martin, who performed the radical operation in seventeen cases, but without the after treatment here recommended. Of these seventeen cases, five died and twelve are reported cured; but five of these were discharged with incompletely healed thoracic fistulæ. The other seven the author fears had some deformity of the chest which his five had not.

In estimating the value of this comparison, we must remember that the time these two sets of cases were under treatment is not given; and that the healing of thoracic fistulæ and recovery from deformities of the chest produced by empyema, is in many instances, only a matter of time.

The treatment sketched seems to us cumbersome and unnecessarily painful, while it is no more effectual than simpler methods. E. F. I.

An Introduction to Pathology and Morbid Anatomy. By *T. Henry Green, M.D.*, Lond., etc. Second American, from the third revised and enlarged English Edition. Illustrated by one hundred and eleven engravings on wood. Philadelphia: Henry C. Lea. 1876. pp. 316.

To any one at all acquainted with the earlier editions of this work little need be said, except that in the present the author has made such revision in the several chapters as was necessary to make the teaching of the book conform to the latest knowledge of the subjects under consideration; that much new matter has been added, and that the number of wood cuts has been considerably increased.

Those not acquainted with this text-book ought to be. We have always thought that for the average doctor this work was

much more useful than some of the larger treatises. Into it is condensed much knowledge, to gain which elsewhere would require great labor and wide reading. For students and practitioners full of cares it is particularly valuable.

In this edition the general high character of the work is maintained; the new cuts are fully up to the standard of those used before, which were excellent; the execution of the work at the hands of the publisher is faultless.

We notice that of the thirty or more works bearing on pathology and morbid anatomy which the author has referred to, none are American, while only nine are British. We shall look for a different showing in the book on pathology, of our second centennial year.

A Contribution to the Medical History of our West African Campaigns. By Surgeon Major *A. A. Gore, M.D.*, late 34th Regiment; Sanitary Officer of the Staff of the Quartermaster General's Department during the Ashanti war of 1873. London: Bailliere, Tindall & Cox. 1876. pp. 219.

This little book does the author credit. As he says in his preface, he has endeavored "to collect together in systematic order the many interesting facts bearing upon the health and efficiency of the soldier in a malarial climate," which are scattered through the literature of the West African campaigns, and has added many personal notes and recollections.

The style of the writing is pleasant; and any one beginning an examination of it will dislike to lay it aside until it is finished.

There are chapters on the climate of the gold coast; on food supply, in its effect upon health; on beverages, alcoholic and others; on tobacco; on water supply; and on medico-chirurgical lessons, beside a number of others.

At the close of the chapter on "spirit ration," he says: "That it can be dispensed with in Africa by men of hardy frame and indomitable perseverance, under great exertion, has been proved by more than one great traveler; but that it does any harm, when taken in moderation at proper times and places, I do not believe."

OPHTHALMIC AND OTIC MEMORANDA. By *Dr. D. B. St. John Roosa*, Professor of Ophthalmology and Otology in the University of New York, Surgeon to the Manhattan Eye and Ear Hospital, and *Dr. Edward T. Ely*, Assistant to the Chair of Ophthalmology and Otology, University of New York, etc.

This very small work "aims to give a concise and correct outline of our present knowledge of ophthalmology and otology, and to serve as a kind of dictionary of these subjects." As such the work merits high commendation. The student who has impressed on his memory by careful study the meaning of every technical term and fully comprehends all the principles enunciated in the work, can follow intelligibly almost any course of clinical or didactic lectures on the eye or the ear.

The work is in duodecimo; price, $1.00.

BOOKS AND PAMPHLETS RECEIVED.

The Electric Bath, its medical uses, effects and appliances. By G. M. Schweig, M.D., etc.

Proceedings of the Connecticut Medical Society, 1876.

A Report on Dermatology. By L. P. Yandell, Jr., M.D., 1876.

Fracture of the Patella, and treatment by a new method. By H. O. Marcy, A.M., M.D., 1876.

Spinal Irritation; its pathology and treatment. By W. A. Hammond, M.D., etc. No. X., Vol. II., of "American Clinical Lectures."

Notes on the Burning of Theatres and Public Halls. Reflections on some of the causes of the great mortality occasionally attending such fires, and suggestions for improved security to life. The antiquity of the drama and the opening of theatres in America, with a chronological list of theatres and other public edifices burned. By J. M. Toner, M.D. 1876.

Walsh's Physician's Combined Call-book and Tablet. Second edition.

The Physician's Hand Book for 1877. By W. Elmer, M.D., and A. D. Elmer, M.D.

The Hypertrophied Prostate. By R. A. Weir, M.D., etc.

Diagnosis of those Diseases of the Eye which can be seen without the Ophthalmoscope. By Henry D. Noyes, M.D., etc.

On Tracheotomy and Laryngotomy. By H. B. Sands, M.D., etc. Nos. VIII., V., and VII., of Vol. II., of "A Series of American Clinical Lectures."

Annual Report of the Northern Hospital for the Insane, of the State of Wisconsin, for the year ending Sept. 30, 1876.

The Ovulation theory of Menstruation: Will it Stand? By A. Reeves Jackson, A.M., M.D., etc. New York: Wm. Wood & Co., 1876.

Micro-Photographs of Human Blood Discs; of Epithelium lining the Lymph Sac of the Frog, and of the head of a cysticercus from the hare, magnified respectively 420, 300 and 40 diameters. Photographed by Dr. O. C. Oliver, of Chicago.

Clinical Reports.

ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

Service of DR. F. C. HOTZ.

1. *A Piece of Iron in the Iris 24 years.*

In July of last year a Mrs. M. Sch., æt. 29, presented herself at the infirmary, because, for the past four weeks, her left eye had been getting red and sensitive. By ordinary daylight we noticed a slight amount of redness around the cornea; the latter appeared perfectly clear, the pupil was round and movable, and the lens exhibited all signs of a mature soft cataract. By the aid of the focal illumination, however, we discovered, in the external half of the iris, a small dark brown fragment of iron with sharp corners and edges; it was lodged midway between the periphery and the pupillary border of the iris, and had evidently pierced the entire thickness of the latter,

so as to wound the anterior capsule of the crystalline lens. For, after dilating the pupil by atropia, we found that portion of the capsule which was behind the injured portion of the iris to be drawn out like a funnel toward, and fastened to, the iris. But the pupillary border of the iris was perfectly free, there being no posterior synechiæ. The focal illumination also revealed the point where the iron had passed through the cornea; it was indicated by a fine linear scar just opposite the foreign body in the iris.

At first the woman could not tell how she lost the sight of this eye, she only knew it had never been sore until lately; but after giving the question, as to the possibility of an injury a few minutes thought, she remembered that when she was about four or five years old a small fragment of a hatchet flew into her eye, and an old woman had tried to take it out. She always believed it had been removed because she felt no pain in the eye afterwards, and because the eye never was inflamed.

The absence of iritis in this case is a remarkable fact, because, as a rule, the iris does not tolerate the presence of a foreign body; sooner or later this excites an inflammation of the iris which can be arrested only by the removal of the foreign substance. And the final history of this case shows that it is no exception of this rule; although the eye had tolerated the fragment of iron during a period of 24 years, it then began to show the signs of iritic irritation, which was likely to lead to a destructive inflammation unless the foreign body was removed in time.

The patient has not returned after her first visit; and it might be possible that the use of atropia had temporarily checked the irritation; may be, however, that she dreaded too much the idea of an operation.

2. *A Splinter of Coal in the Posterior Layers of the Cornea.*

On October 14th, an Irish boy, æt. three years, was brought to the infirmary. Three days ago another boy had thrown a small piece of coal at him; the coal hit his right eye and broke into several pieces; one piece, at least, was taken out of the eye by the boy's father. But when the eye, instead of getting

well, became redder, more painful, and very sensitive to the light, the parents sought for advice at the infirmary.

The eye exhibited the usual symptoms of corneal inflammation, which was occasioned by a small wound in the inner half of the cornea. This wound was made by a very small splinter of coal, which had cut its way obliquely backward through the corneal tissues until it reached Descemet's membrane. There it was arrested, and there it lay with its sharp edge grating on that very delicate membrane; it could gradually preforate it and fall into the anterior chamber. The slightest touch with an instrument also would have pushed it through the posterior layer of the cornea into the aqueous humor.

In order to prevent this untoward accident we proceeded in the following manner: . The boy being etherized the wound was enlarged by cautious strokes with a cataract knife, so as to change its oblique and narrow track into a short and wide funnel, its narrow end being turned toward the foreign body. The wound thus being made larger than the largest diameter of the foreign body, the latter could easily escape if moved by a slight pressure from behind. This pressure could not be applied by an instrument, inasmuch as any attempt to insert it between the splinter and Descemet's membrane would necessarily have ruptured the latter and have dislodged the coal into the anterior chamber. But we could utilize the pressure of the aqueous humor for the motor power. For this purpose the Descemet's membrance was punctured a little to one side of the foreign body, and the puncture was enlarged by carrying the point of the knife (which was then in the aqueous humor) toward and behind the coal. By a gentle pressure upon the lower border of the wound with the blade of the knife the puncture gaped sufficiently to permit the escape of the aqueous humor. This current of water, directed toward the posterior surface of the splinter was strong enough to dislodge the latter and to carry it up toward the anterior surface of the cornea. As soon as it had fairly receded from the posterior surface of the cornea the pressure upon the wound with the knife was discontinued, in order to

stop the further escape of the aqueous humor. The splinter was now near the anterior surface of the cornea, and could be easily and safely removed by the point of the knife while it was withdrawn from the anterior chamber. It was a minute thin particle of hard coal.

By arresting the flow of the aqueous humor before the anterior chamber was entirely emptied, we prevented the anterior surface of the iris from coming in direct contact with the posterior surface of the cornea, and obviated thereby the possibility of an adhesion of the iris to the cornea at the point where it had been punctured. The operation over (which did not occupy a quarter of the time it takes to describe it) a drop of a solution of atropia was instilled, and the eye carefully bandaged. Three days later all signs of inflammation had disappeard, the corneal wound was closed by a fine scar, the anterior chamber of a normal depth and the pupil regular and still dilated by the effect of atropia.

3. *Paralysis of Ocular Muscles after Diphtheria.*

During the present epidemic of diphtheria it may be very appropriate to draw the attention of the physicians to the fact that a paralysis of the muscles of the eye is occasionally met with after diphtheria. It may follow a mild or severe attack of the disease and it may settle upon any of the external muscles, or affect principally the ciliary muscle. Under a general treatment with tonics the function of the affected muscle will, as a rule, be restored.

The following cases have lately come under our observation:

a. *Paralysis of the Right External Rectus Muscle.*

Fritz R., æt. four years, was seized with a violent attack of diphtheria in November; he was sick almost four weeks. When he was convalescent his parents noticed that his left eye was turned inward. Examined December 23d, a marked convergent squint of the left eye, due to a partial paralysis of the external rectus muscle. Ordered the elixir of calisaya bark and iron.

January 27th. The eyes are straight to all appearance, and

by covering the left eye with the hand, so as to exclude it from vision, no deviation can discovered.

b. Paralysis of the Ciliary Muscle.

Gustav N., æt. nine years, had a mild attack of diphtheria in the latter part of November. After recovery he complained of being unable to read ordinary print. The parents unable to notice anything abnormal in the eyes, suspected the boy of malingering in order to be excused from school.

Examination, Jan. 1st. Pupils rather large and decidedly sluggish in responding to the change of light. No inflammation, no obscuration of the transparent media, normal fundus. $V=\frac{2}{20}$ with convex 24; yet with these glasses he can read Jaeg. 12 only, but with convex 8 he is able to read Jaeg. 1 fluently at a distance of 12 inches.

The paralysis of the ciliary muscle obliterated the power of accomodation; the eyes being naturally far-sighted, required the aid of a convex lens (+24) to adjust the focus at distant vision (at 20 feet). And to adjust the focus for the short distance of 12 inches an *additional* lens (+12) was required; *i. e.* $\frac{1}{24}+\frac{1}{12}=\frac{1}{8}$.

c. Paralysis of the Ciliary Muscle.

Stella N., æt. seven years, Gustav's sister, also had diphtheria at the same time, and suffered from weakness of the accommodation (partial paralysis of the ciliary muscle).

d. Partial Paralysis of the External Rectus.

Another sister, æt. five years, had a marked convergent squint of the left eye after diphtheria. At the time she was examined the external rectus muscle had recovered its power to a great extent, showing a deficiency only under the covering hand.

Medical News and Items.

THE PREVAILING EPIDEMIC AND THE MEDICAL PROFESSION OF THE CITY.

About 100 medical gentlemen of Chicago assembled at the Grand Pacific Hotel, on the evening of January 25th, in accordance with a request issued by the secretary of the Medical Press Association, at the suggestion of its other officers. The ostensible purpose of the call was the consideration of the invitation made by the Health Commissioner of the city to the medical profession, to furnish him with such counsel as would be most available, in view of the great prevalence of scarlatina and diphtheria, and the resulting mortality in the various wards.

Dr. Hamill, the president of the Association, presided, and Dr. Sawyer acted as secretary. Those who were present wisely concluded not to enter into a discussion of the appropriate treatment of either disease, but to confine the debate to the question of prophylaxis, both by hygienic and medicinal means. As to the latter point great difference of opinion was expressed; not, however, so much on the question of the value of any special remedy as a prophylactic (for it seemed to be the view of almost all present that no such remedy existed), but as to the propriety of issuing a formal statement positively declaring that prophylaxis by internal medication was both valueless and positively injurious. It was finally concluded that the entire question should be submitted to a committee (who were instructed to report at a subsequent meeting) composed of Dr. H. A. Johnson, chairman, and Drs. Ingals, Byford, Etheridge and Jackson.

On the 27th of the month the adjourned meeting, held at the same place, was largely attended; and the committee above named presented their report. The various articles in the latter were separately discussed and argued upon; none meeting with such determined opposition as that relative to the value of preventive medicines. At this time, as at the

preceding meeting, the objection was based chiefly, not upon any belief in the value of such medicine, but upon what was considered the impropriety of absolutely discouraging the public from employing remedies which might be supposed to have prophylactic value, even when administered under the direction of a judicious physician. The result finally reached is seen in the subjoined copy of the report. We are of opinion that, taking into consideration the existing prejudices in the minds of many of the laity, and the honest disposition of many medical men to attempt to secure their patients from an imminent danger, the recommendation is a good one.

In all other respects the report of the committee is admirable from every point of view, and was worthy of promulgation to the representative of the Health Department and the public, before whom the report was spread in full by the daily journals of the city. We cannot but think that the gentlemen engaged in this discussion and the preparation of this report, discharged a high public duty by their action, and one which has not failed to heighten public respect for their position and attainments. Subsequently, Dr. Oscar C. DeWolf, a competent and worthy medical gentleman, was nominated by the Mayor of the city as Superintendent of the Department of Health, and this nomination was confirmed by the Common Council. The new incumbent has since proceeded to the discharge of his duties in a manner which promises an improvement in the administration of an important public office, whose action we have had frequent occasion to critizise in these columns.

Let the medical gentlemen of Chicago hereafter nominate the candidates for all positions where the county and city employ physicians, and we shall soon see a desirable divorce between politics and science. Hitherto "politics" has been the greatest enemy of scientific progress. Let us hope that with such nominations in the future, no medical man may be found engaged in the disgraceful and unprofessional task of lobbying for place, and soliciting votes for his appointment to a position of profit.

We feel assured that the assembling of medical men for the discussion of questions of general and public importance, under the auspices of an association whose scope is less limited than that of the medical societies proper, is a step in the right direction; and its substantial fruit has been pointed out. We trust that by the aid of such additional meetings in the future the medical men of Chicago will give some guarantee to the public that they will so regulate the practice of medicine, at least *within their own ranks*, that none but competent men will be found there, to whom the people of the city are invited to entrust their health and their lives.

The following is the report of the committee:

REPORT.

To the Health Department of the City of Chicago: In conformity to the request of your superintendent, a large assembly of physicians convened at the Grand Pacific Hotel on the evening of the 25th inst., to consult on the sanitary condition of the city, and especially as to the most effectual means of checking the ravages of scarlet fever and diphtheria, under which it has for some time suffered. At this time the undersigned were appointed to prepare and present a report on the subject to a subsequent meeting. In fulfillment of the duty thus imposed the subjoined report is made. It is clearly true that the conservation of the public health is one of the most manifest duties of any civilized people, and the subject cannot escape the consideration and care of civil governments. At all times, and especially in times like the present, the health department of the city should be conducted on principles of strict economy, but we think sufficient money could be diverted from our present municipal expenses for the public charities of the county, and that without impairing their usefulness, to give an increased security to the lives and health of those outside of these institutions. Even liberal expenditures would be warranted, if for anything, for the purposes we seek; for aside from the mental and bodily pain that

sickness brings to individuals and families, it is the most expensive misfortune that can rest upon a people; and to the poor it is an overwhelming burden.

Disease checks the production of wealth, and necessitates its largely increased consumption in the care of the sick, while the lives that are sacrificed have a substantial value to the state. Viewing the question in this, its lowest aspect, it is clear that a proper regard for our commercial, social and pecuniary interests, demands that a residence in this city should be rendered safe, salubrious and agreeable. Nature has given the surroundings that should make Chicago one of the most healthful cities of the earth, and all that is necessary to the realization of this condition is the intelligent co-operation of its citizens. We think the board of health should be organized with powers adequate to the accomplishment of this purpose.

As to scarlet fever, the more immediate subject of our inquiry, we count it among the most contagious of diseases, and of its fatality the many stricken homes of this and other cities are a painful attestation. The disease when established has a course largely controlled by the laws of its own nature. Most cases, undisturbed in their progress, go on to recovery, while those of aggravated severity are not reprieved from death by the most enlightened and assiduous efforts of both physician and friends. Therefore the public safety should be sought in efforts to prevent this disease from being disseminated. We believe proper methods faithfully carried out, would expel it from the city, and prevent its return in an epidemic form. Toward effecting this the following rules suitable to be observed so far as practicable are submitted:

Scarlatina, scarlet fever, scarlet rash and canker rash are one and the same disease. It is very infectious. A very mild case may give rise by infection to very a severe one. Infection is contained in all discharges from the body during the progress of the disease and recovery, but more especially from the skin during convalescence, and when the cuticle is being shed. The dry particles which are separated from the skin are highly infectious, and retain their infectious nature

for an unknown time, unless thoroughly disinfected. They are disseminated through the air, and become attached to articles of furniture, clothing, draperies, wall papers, etc. Thus the disease may readily be conveyed from one person to another by those who are not themselves suffering from it. It is also conveyed by bedding, clothing, furniture, and other articles, and by rooms which having been exposed to infection, have not had their floors, ceilings or walls disinfected, or had the wall paper removed.

Isolate the person affected as much as possible from other inmates of the house. This is most readily effected by at once removing him to an upper room, if circumstances permit. The room selected should be large and airy, and the means of ventilating it, which shall be presently mentioned, at once adopted. No child should be permitted to go to school, or to any public assembly, from an infected house, and communication of such, in play or otherwise, with healthy children should be prevented. When a person has had the disease, he should not be permitted to mix with others until he has perfectly recovered, and has had his clothes thoroughly disinfected; and not even then without the permission of his medical attendant. Nor is it advisable that any one who has had the slightest communication with a person suffering from the disease should go to any church, meeting, public house, fair, or market, etc. Neglect of these precautions is a prolific cause of the spread of this disease.

Attendants on persons suffering from scarlatina should be chosen, if possible, from those who have already had the disease.

There should be no public funerals of any patient who has died of any infectious or contagious disease. Remember that the separation of the sick person from the well is the most certain means of preventing the spread of the disease.

The room must be kept well ventilated under the physician's direction, by means either of a fire (when required) or of an open fire-place and chimney, and of windows opening to the external air. By means of the latter ventilation is most effectually procured, so as to avoid draughts, in the following

manner: Raise the lower sash of the window three or four inches, then procure a piece of wood made to fit accurately in the lower opening, and place it there. By these means free outward and inward currents of air, without causing any draughts, are obtained through the vacant space between the two sashes. When the window is merely opened from the upper or lower sash draughts are invariable caused.

Before removing the patient to the room to be occupied, the following preparation ought to be made: All superfluous curtains, carpets, woolen articles, unnecessary clothing, in short, everything likely to retain infection should be at once removed. The patient's bed ought to be so placed as to allow of a free current of air around it, but not so as to place it in a draught.

All sheets, towels, handkerchiefs, etc., which have been used by the patient should be thoroughly disinfected and afterward carefully washed.

In all cases of infectious disease it may be as well that the patient use rags or pieces of old linen, etc., (in lieu of pocket handkerchiefs,) which may afterward be burned, or, better, buried.

When the bed or body linen is soiled, the soiled spots should be sprinkled with some disinfecting powder.

Frequent bathing and the application of oil or glycerine and water, or some such substance under the direction of the physician are advisable. First, they prevent the escape of contagious matters from the body. Second, many physicians believe they are useful.

After the removal of the patient to the room in which he is to remain, the outside of the door and door posts should be completely covered by a sheet kept wetted by some disinfecting fluid, such as the chlorides, sulphates, or sulphates of zinc, lime, soda, iron, etc. Implicit trust, however, should not be placed in the so-called "disinfectant." They are very useful when judiciously employed, but they are by no means certain "preventives of disease."

Rooms which have been occupied by a person suffering from infectious disease should, on the termination of illness, be

at once disinfected. To effect this thoroughly, all crevices around windows and doors and the fireplace should be closed by pasting pieces of paper over them. Lumps of sulphur (brimstone), one pound for every thousand cubic feet of space, should then be put into a metal dish, placed by means of tongs over a bucket of water. This being set fire to, the door should be closed, and the room should be allowed to remain without interference for three or four hours. After this time the windows should be thrown open, and when the fumes have disappeared all the wood-work and walls should be thoroughly washed with soft soap and water, to which carbolic acid has been added (one pint of the common liquid to three or four gallons of water), and the paper from the walls stripped off. In white-washed rooms the walls should be scraped and then washed with hot lime.

No reliance ought to be placed upon any medicine given to prevent the disease. Medicines so given may do harm. They should be taken only upon the order of the physician of the family.

WHAT THE AUTHORITIES OUGHT TO DO.

1. Require a report to the health department of every case of contagious or infectious disease.

2. Officially inquire into the origin of disease in each case.

3. Take such measures as will prevent communication between the infected location or house and those not infected, by the placing of placards, and other measures which have been found useful as warnings to the public; and by prohibiting children from infected houses from attending public schools; prohibiting public funerals of persons who have died from infectious or contagious diseases, and by enforcing the disinfection of clothing, furniture, bedding and the rooms used or occupied by persons who have had any contagious or infectious disease.

If additional legislation is required to secure the measures, it should be had without delay.

The committee earnestly recommend the people, the physicians of the city, and the public authorities to adopt and

enforce, as far as possible, substantially the measures above recommended. Concerning the utility of these means there is among educated physicians no important difference of opinion. The means proposed and the disinfectants suggested are not expensive.

THE PANCARTES.—Our French exchanges indicate that the medical profession of Paris have been much moved recently in consequence of discussions and correspondence on the subject of the "*pancartes.*" These are a species of card suspended above the head of a hospital patient, indicating his name and other facts relative to his case, of interest to the surgeon. The general superintendent of the Paris Hospitals, a layman, has recently insisted that these cards should state also the religion of the beneficiary, when he or she received the sacrament last, and other items which would be of value only to the priest or sisters of charity. A vigorous public protest against this order has been made by several eminent hospital surgeons who claimed that the sick committed to their professional charge shall not be annoyed by questions intended to ascertain such facts as those required to be stated upon the "*pancarte.*"

There have been rejoinders and sur-rejoinders, but the medical men have been almost unanimous in their condemnation of the edict, while they have been coolly notified by the authorities to attend to their professional duties and leave the religious care of their patients to the clergy and sisterhood.

Editorial.

As the news of the misfortune which has overtaken the publishing house of W. B. Keen, Cooke & Co. will reach the readers of the MEDICAL JOURNAL AND EXAMINER before the February number will make its appearance, and may cause doubt on the part of the subscribers as to our future, we take occasion to say that the JOURNAL AND EXAMINER will be issued with its accustomed regularity.

The Medical Press Association is pledged for its success, and will see that under no circumstances will it be allowed to fail, either in its promptitude or excellence.

We cannot now inform our readers just what arrangements for the publication of the JOURNAL AND EXAMINER will be made, but we can assure them that it will be published. In our next issue we hope to be able to give them every information in reference to our plans and prospects.

We deplore the disastrous effects hard times have wrought upon our friends and publishers, heartily sympathize with them in their trials, and hope that very soon they will recover from them and become more prosperous than ever.

We will close this editorial note by expressing our warm appreciation of the generous and diligent co-operation we have received at their hands, in our efforts to make the MEDICAL JOURNAL AND EXAMINER a first-class medical periodical.

☞ Until futher notice all Subscriptions and Communications should be sent to the EDITOR, at the office of publication, 115 State Street.

Obituary.

In Chicago, January 7, 1877, died, ORRIN COOLEY, M.D, aged 33 years.

Dr. Cooley was a native of Massachusetts. He took his degree at the University of Pennsylvania, in 1869. For a year after his graduation he was house surgeon at the State Asylum for Inebriates of Pennsylvania. He settled in Chicago a few months before the great fire, by which he sustained severe loss.

He was well but not widely known in the profession. Those who knew him esteemed him. He was an honorable physician, a student, a scholar, a truly modest gentleman — altogether a man the profession could illy afford to lose.

He had delivered in the Chicago Medical College, some years ago, several courses of lectures on surgical anatomy, which were distinguished for their clearness and excellence.

Summary of Progress in the Medical Sciences.

I. Practical Medicine.

1. *Athetosis.* Bernhardt. *(Clinic, Mo. Abstract,* August, 1876.

Dr. M. B., privat docent in Berlin, contributes an article to *Virchow's Archiv,* Band 67, Heft i., in which he attempts an analysis of those complex symptoms grouped by Hammond under the name athetosis (without fixed position). This disease is characterized by an inability to retain the fingers and toes in any position in which they may be placed and by their continued motion. These movements are not irregular, as in chorea, nor tremulous, as in paralysis agitans, but occur slowly, and with a certain degree of regularity. The will is almost powerless to control them, and they occur even during sleep. As a result of the continued activity of the muscles of the fingers, particularly of the thumb and index finger, a considerable hypertrophy of the muscular tissue of the forearm takes place. The sensibility of the skin is diminished; the prognosis, so far as regards a cure, is unfavorable, all therapeutic means having thus far proved futile. Up to the present time no *post-mortem* examinations have been made. Hammond suspects a lesion (sclerosis) of the corpus striatum or of the thalamus opticus. His first two cases were those of two men, one of whom, a very intemperate person, had suffered attacks of epilepsy and delirium tremens; the other was of a tubercular tendency, and his father and grandfather had been excessive drinkers. After several decided apoplectic attacks, he became aphasic, and, in addition, exhibited the usual symptoms of "athetosis." Up to the year 1873, Hammond had encountered six cases of this affection, two of these being women; three were drunkards. In the *Medical Times and Gazette,* 1872, Vol. I., Clifford Allbut described the case of a woman, aged fifty-five, presenting these symptoms, but in whose case no suspicion of tippling could be entertained. The report, however, was accompanied by an expression of doubt on his part of the correctness of classifying it under the same head as Hammond's disease. It differed from the latter chiefly in that the movements ceased entirely during sleep. Currie Ritchie, in the same journal (page 342), and with the same reservation, reports the case of an engineer, aged fifty-nine, non-syphilitic, and not given to drink, who, after an apoplectic seizure, remained speechless (aphasic?) for three months, at the end of which time he presented these continuous uncontrollable movements of the right fingers and toes.

In the *Journal of Mental Science,* Vol. XIX., 1874, Gairdner relates the case of a boy, not predisposed to nervous maladies, who manifested the same symptoms; absolute rest and strict attention served to diminish the

number and force of the movements, but they never ceased entirely except during sleep.

These are all the cases thus far carefully described. It will be observed that the only minute accounts have been rendered by Americans and English, as the case mentioned by Eulenberg, even in his own estimation, scarcely falls under this head.

The writer then gave the following report of a case observed by himself:

Robert Krüger is the twelve-year-old son of his still living and healthy father. The mother, likewise in perfect health, has borne twelve children, of whom seven still live. Four died in early infancy; the fifth, a son, was in good health until sixteen years old, when, having the toothache, he went to a dentist, who broke off the diseased tooth. From this time began a "restlessness" of all the muscles of his body, which led his parents to take him to the Berlin poliklinik. The symptoms improved after a few applications of the constant current, but increased very much after the removal of the root of the tooth, and he soon afterwards died.

Of the children still living, a daughter, ten years of age, had violent choreic symptoms for over six months. She has now recovered, and is strong and healthy, but with every variation of the weather manifests sudden violent changes of disposition, and has severe jerking motions of one side. The five remaining children are healthy and active.

This boy Robert was also, up to his fourth year, in good health. After an acute illness, lasting for several weeks (from all accounts this seems to have been exanthematic), irregular motions of the right foot and hand were observed. Although these continued, he went to school at the usual age, and progressed with his studies like other children, but was often observed to cry. He learned to write with his left hand.

The patient is a boy quite well developed for his age; has no fever; attends school; appetite and sleep are good; he has frequent headaches, particularly in the neighborhood of the forehead and temples, which parts, especially the left side, are sensitive to pressure. His cerebral functions seem perfectly intact. Nothing abnormal can be discovered in the reaction of the pupils nor the movements of the eyes. The tongue, on being protruded, deviates very slightly to the right, and exhibits involuntary contractions. Both tonsils were enlarged. In state of quietude, no difference of the two sides of the face could be observed; but when the patient attempts to shut his eyes, the motion is much more rapid on the left side, and the left angle of the mouth is somewhat higher than the right. During the act of laughing the mouth is drawn a little more toward the right. Now and then, perhaps twice within a quarter of an hour, and when speaking, he draws the mouth a little to the right. His voice is low, but clear and distinct.

Motility and sensibility of the entire left half of the body are perfectly intact. Even on the right the motions at the shoulder and elbow are readily made, but more slowly and weakly than on the left side. No involuntary movements are ever observed in the head, shoulder or forearm of the right side during sleep or in a state of excitement. The right lower

extremities, the thigh and leg, are perfectly quiet. The foot and toes, like the hand and fingers, seem to be the only parts involved. Now and then he suffers pain of a shooting character in the entire right upper extremity.

The patient walks alone; now and then his foot bends laterally, while his toes often turn under. He can stand for a considerable time on his right foot. If he be seated quietly, and his attention wholly occupied with something else, the right hand and fingers will remain in perfect rest. So soon, however, as his attention is attracted to these parts, a remarkable restless play of the fingers begins. In tolerably rapid succession these are ab- and adducted, flexed and extended; the thumb, the index, and the little finger are the ones affected, whilst the two others remain quiet. The joints of the hand seem meanwhile to be immobile, while a continuous muscular play is observed on the flexor and extensor surfaces of the right forearm; the configurations of the muscles and tendons of the forearm are undergoing continual changes, which are quite noticeable under the skin. The sensibility of the entire right side of the body, face, trunk, and extremities, as compared with the left, is decidedly diminished. Now and then a prolonged effort of the will succeeds in controlling the movements, but just as often they become much more violent. The right forearm is more voluminous than the left. The exact amount of increase due to these movements cannot be determined, as the left is also larger than it would otherwise be, since the boy has been using it in lifting, writing, eating, etc., ever since the fingers of the right side began their involuntary play. The hip and knee joints are at rest. There is a slight lateral displacement of the foot and a distinct plantar flexion of the toes. Sometimes, particularly at night (in which they differ from the fingers), decided involuntary movements of the toes take place. So, at least, say his relatives; his father has observed these motions during his son's sleep.

The continual motion of the muscles of the forearm rendered an electrical examination of but little value; but it was shown that the muscles supplied by the ulnar and median nerves responded promptly to the faradic and constant currents.

The heart-sounds, examined repeatedly, are loud and clear.

The malady has now remained unchanged for seven years; galvanization, attempted for months (by the passage of a weak constant current through the head), the regulation of diet, and the administration of tonics, have been followed by no results worthy of mention.

There can be but little doubt that the history of this case corresponds essentially with that series of symptoms denominated by Hammond "athetosis." As in other cases, we find here the restless play, especially of the fingers and less of the toes, during perfect quietude of all other parts of the extremities; we find the peculiar position of the foot and toes, the anæsthesia of that half of the body, the diminution in strength, even though in but slight degree as compared with the healthy side, the hypertrophy of the muscles kept in such continual motion; we observe, also, the long continuance of the malady and the seeming impossibility of cure.

The cases thus far observed, of which we have reliable knowledge,

affected three men, one woman, and one boy; both sexes, and early and late life. Of these, Allbut's woman and Gairdner's boy had no hereditary predisposition, and no indications of previous disease of the central nervous system. On the other hand, one of Hammond's was a drunkard and epileptic; and the second, the son of a toper, became aphasic after an apoplectic attack. This was also the history of the three male cases reported by Ritchie. The history of the boy Krüger demonstrates a predisposition in the family to nervous diseases, particularly to chorea. That he acquired this affection after a febrile exanthema proves nothing; but it is somewhat remarkable that in his case the nervous disease developed into something so resembling chorea, a disease with which at first sight it would be most likely to be confounded. Now, then, we come to the point of greatest importance, namely, whether in the collection of symptoms described by Hammond we really have a new disease, one not heretofore described. It might, perhaps, be mistaken for that other nervous malady, *paralysis agitans.*

The most essential points in the symptomatology of this disease are a tremulousness of the voluntary muscles and their gradual wasting away. It is a disease of advanced age, although a few writers (Meschede, Huchard) have observed cases in children; at all events, these early cases belong to the greatest of rarities. The absence of any great degree of paralysis, in these cases of athetosis, which their long continuance might have led us to suspect, the absence of all tremors of the head and remaining parts of the upper extremities, the absolute limitation of the involuntary motions to the most peripheral portions of the extremities, the restless movements of the fingers (which cannot however be classed as "tremulous," as it represents more correctly a motiveless grasping), all seem to indicate the incorrectness of identifying these two sets of symptoms. The picture of the affection just given likewise contraindicates its classification with insular degeneration of the cord, another peculiar affection heretofore classed with the great group of chronic diseases of the spinal cord. In this disease uncontrollable tremulous motions are also observed, but these never occur so long as the patient undertakes no voluntary motion; in fact, the point recognized by all writers as distinguishing this from paralysis agitans, is that these tremors occur only when the patient is attempting a voluntary motion. In that disease, again, the motions are tremulous, which, as before stated, is not the case in athetosis; further, in insular sclerosis they are not confined to the fingers and toes, nor are disturbances of sensibility observed in the majority of cases. Finally, in sclerosis the origins of many cranial nerves are affected by the chronic degenerative process, and so complicate the symptomatology by affections of the ocular muscles, of those of the tongue, the larynx and the pharynx, that these complications become the almost characteristic symptoms of the disease; this is not the case with athetosis, thus affording a proof that the latter is a separate and distinct disease, and should not be mistaken for or classed with sclerosis. Still further, it must be remembered that sclerosis, like paralysis agitans, has rarely, if ever, been encountered in childhood. We

come back finally to the point from which we started; an impartial observer of a case of athetosis would probably first suspect that he had to deal with hemi-chorea, or unilateral chorea. [The writer lays special stress upon the word "unilateral," as all the cases thus far have been right-sided.]

The patient whose history is above narrated has had for years an affection coming on after a long-continued illness; Hammond's first case (an epileptic) was in an unconscious condition (delirium) for six weeks, at the end of which time the right upper extremity began to manifest the motions characteristic of athetosis; in his second patient they came on after an apoplectic seizure followed by aphasia; in Ritchie's case, too, these followed an apoplectic attack succeeded by a three months' aphasic condition. Here, too, the right extremities were the affected ones. These considerations lead Bernhardt to place athetosis in that group of affections which have lately been designated under the names Post-paralytic chorea (Weir Mitchell, *Amer. Journ. Med. Sciences*, 1874, page 352,) or Hemichorée post-hémiplégique (Charcot, *Progrès Médical*, 1875, Nos. 5 and 6). According to these authors, a choreic condition is frequently developed in the paralyzed limbs after a long continuance of hemiplegia. There is generally also an anæsthesia of the skin and of the organs of sensation on the paralyzed side. Charcot locates the affection on the opposite side of the brain, at the posterior portion of the thalamus opticus, the nucl. cand., and the posterior portion of the foot of the corona radiata.

The writer agrees with Hammond and Charcot in considering this the location of the lesion in athetosis. Still we have as yet no positive proof of this, as no *post-mortem* examinations have yet been made. The previous apoplectic attacks in several of the patients, the aphasic condition, and the disturbances of sensation in the affected parts afford pretty conclusive evidence.

He does not, therefore, feel inclined to admit the correctness of Eulenberg's view which locates the lesion in circumscribed portions of the cortical substance. Affections of this character have never been observed to last for years, nor have circumscribed groups of muscles exhibited the movements peculiar to athetosis; nor have the motions been continuous, quiet and regular, but have recurred as separate attacks at considerable intervals; there have been jerking movements in the extremities which ceased after a time, to be succeeded by paresis. These cases do not last so long as those of athetosis, nor do they follow that fixed course we have observed in the ones thus far examined.

It was this peculiar phenomenon of the limitation of the involuntary, choreic movements to the fingers and toes which induced Hammond to adopt the new name "athetosis." The symptoms in general resemble those of hemi-chorea, but differ in some very important particulars, for in the latter affection the motions are not confined to the extremities, but extend also to the face and the organs of speech and deglutition; besides, hemi-chorea affects by preference the left side. Although he believes that in this affection we have nothing more than a modified chorea, he would,

for the present at least, retain the term athetosis, as the affection differs from all others in some important features, and as the term itself is based only on symptoms, it should be allowed to remain until sufficient anatomico-pathological observations have been made to establish a name for all time.

2. *Lesion of the Cerebellum and Diabetes Mellitus.* MOSLER. (*Berl. Klin. Wochenschr., N. Y. Med. Record.*)

In a fatal case of diabetes mellitus, which was treated in Mosler's clinic, and in which there had been no disturbances of sensation, or motion, or of the special senses during life, the autopsy revealed a well marked spot of inflammatory softening about the size of a pigeon's egg, in the nucleus dentatus of the left hemisphere of the cerebellum. The theory of the neuropathic origin of diabetes rests on sound practical grounds, and there can be little reason for doubting that in this case the increased secretion of sugar was excited by the central affection, especially as Eckhard has shown that injury of the second lobe of the vermis cerebelli in rabbits will artificially excite diabetes. It is strange that such a well marked lesion was not attended by any signs of disease of the central nervous system during life.

3. *Functional Spasm.* MITCHELL. (*Am. Jr. Med. Sc.*, Oct., 1876.

Dr. M. describes a number of cases differing in several particulars from writer's cramp and the spastic disorders of shoemakers, tailors, etc. Such cases are either those wherein, (1) natural muscular actions are exaggerated, with sometimes spasmodic activity in remoter groups, or (2) action of one group of muscles causes spasmodic acts, tonic or clonic, in remote groups of muscles not involved in the original movement, or (3) standing or walking occasions general and disorderly motions affecting the limbs, trunk and face, and giving rise to general spasm without loss of consciousness.

One case was that of a maker of watches, whose work required him to be constantly picking up tiny screws; he had followed this employment thirty years. His general health was perfect, but for two years frequently on picking up a screw his thumb and forefinger would become locked fast with a powerful grip, which would last from ten to thirty minutes. Often the spasm would cause the fingers to be cut by the screw. The spasm occurred ten or twelve times a day. The spasms occurred oftenest when his body was in the usual position for work. There was no pain, and only at times slight tremor. He had all sorts of treatment. Nothing but rest did him any good.

Another patient was a sawyer of wood, of forty, temperate and healthy. He had occasionally a spasm of the biceps, which would occur just as he had the saw drawn back for a downward motion. The spasms were violent, the forearm being drawn tightly up against the arm and with such power that a force of eighty pounds pulling against the forearm only

caused the spasm to slowly give way at the end of five minutes. The spasms sometimes lasted for several hours. An attack occurred usually once or twice daily. The spasms ceased after several months under the use of the induced current—one pole on the outside of the biceps, below, and one on the belly, above, and the strongest endurable current being passed for two hours daily—and hypodermic injections of atropia in the belly of the muscle.

An officer in rugged health was shot through the forearm and arm at the same moment, as he was in the act of drawing his sword. His hand grasped the sword hilt with such a spasmodic grip that the left hand was required to pry apart the fingers.

Both the median and musculo-spiral nerves were divided and he had for many months tormenting causalgia (burning pain) in the palm. He eventually recovered from this. After the war he had frequent attacks of violent spasmodic closure of the hand, which would come on when he was holding something in the hand, and always with a sharp pain at the point of division of the median in the palm. The spasm would last two to ten minutes, and the palm was often cut by the violence with which the nails were driven into it. The pain subsided as the spasm came on, and the latter was painless.

Twelve successive blisters of the palm were followed by a disappearance of the malady, and at the end of a year it had not returned.

A plumber forty-five years old was struck on the back of the head and knocked down, in 1862. He had stiffness in the muscles at the back of the neck, and in three months his head was slowly drawn more and more to the left. Afterward he had frequently horrible spasms in the trapezius, sterno-cleido-mastoid, tracheloid and spinatus muscles. "Every minute, at least, the head was jerked backward and twisted to left, the shoulders drawn up, and a storm of rapid but energetic spasms swept over the facial muscles." He improved greatly while taking gelseminum and bromides in liberal doses.

Soon afterward he began to have spasms of the submental muscles. While eating his mouth would suddenly be jerked open and remain so until he would close it with his hands and chew a little more, when it would return. "When ready to swallow his face presented a picture of terror. He would suddenly muster courage and swallow the contents of his mouth at a gulp. Then instantly the jaw flew open, the head was drawn back and down on the left shoulder, the face was convulsed, sweat broke from his forehead, and the attack was at an end."

One case was of spasmodic "exaggerations of walking." The patient was a boy of six, and the trouble came on slowly after an attack of measles. The left leg acted normally. "As he swung the right forward and raised the toes to avoid touching the ground, there was at first a sudden spasm of the tibiæ and peroneal muscles, so that the tip of the foot was jerked up too high." This suddenly relaxed, and as the body was raised on the ball of the foot it was lifted abruptly by a spasm of the gas-

trocnemii, which continuing jerked the leg backward—a true string halt. While at rest on his back he moved the leg without spasm.

In another case—a child of seven—there were symptoms similar to the above, but some that were different. She did not learn to walk until her fifth year. In flexing the foot and the muscles above the knee there was a rigidness, flexion being resisted by the antagonizing muscles so that the motions were made slowly and with difficulty—a condition he describes as "lead pipe leg." "Every time the foot came down the gastrocnemius muscle contracted violently," and lifted the child with a jerk. The tendons of the calf were cut on both feet, with the result of marked improvement. Intellectually this child was normal.

The next case was a sallow lad of seventeen, who had measles at the age of nine, recovering slowly with weakness of the legs. As his legs had grown strong a stiffness had come over him embarrasing his movements. The legs were developed to nearly an equal degree. While recumbent they were quiet; standing, the back was drawn into a bow, and a strong effort of the will was needed to keep the left leg quiet—spite of effort it would occasionally be jerked upward. Walking, both gastrocnemii jerked, making a string halt. When seated he kept the leg still by crossing it over its fellow. Electricity in all forms failed of any good in this case. A long series of atropia injections into the calf did a little good. Repeated cross sections of the back muscles were made at different levels, and slight benefit ensued. Finally an apparatus limiting the extent of motion was applied.

A watchcase-maker, thirty-three years old, had a bad family history. A sister, two aunts and his mother had palsies in middle life; an uncle had epilepsy and a cousin dementia. He was always nervous, never had syphilis and was well until 1865, when for two days he was unconscious from sunstroke. Ever since he had been made weak by summer heat. In 1874 he first noticed weakness of the legs in walking; he was obliged to stop as if to gain power; after which the right leg would drag for a time. Pain now occurred in the back of the neck and lumbar spine. In January, 1875, tremors began in the left arm, which increased until in three months a strange state existed. In sleep there was no movement. Soon after waking the left hand began to twitch, the fingers moving as if playing a violin. "The slightest movement of any other limb, speaking or eating" caused the arm to execute a constant motion of striking the bed or his side, the limb being the while extended. On walking this motion was exaggerated and resembled the rapid movements of a pendulum. The rate of motion was tolerably uniform, and was from 157 to 200 to the minute. It was as rhythmic as the heart beat. If the right hand was extended at a right angle with the body the rate would suddenly increase to 200, to fall back to 160 on bringing the arm at rest by the side.

"When there was no pendulum spasm he could perform with the left arm any voluntary act not involving the hand, which never ceased to twitch; but while the swinging spasms lasted he could execute no volitional act," and the effort to move the limb increased the spasms greatly.

"Excitement and emotion, and all forms of electricity added to the force of the motions, but voluntary movement of other limbs increased the number more than the force." Attempts at passive motions caused pain in the occiput.

"He has power to stop the spasm by certain manœuvres. If he seizes the left hand with the right and flexing the left arm, holds it there in a kind of general spasm, the left hand for a moment seems to struggle with increased violence; he totters; the face is convulsed; there is horrible pain in the back of the head. Then he gently releases the left arm, which, save for a slight tremor or twitching of the unquiet fingers, remains at rest, and may not move in violent spasm for an hour or more, and is sometimes nearly still for twelve hours."

There was no loss of consciousness, anæsthesia, ocular trouble or aural defect. No treatment had been of any service.

Dr. M. closes his paper by a record of three cases in which, while the patient was at rest, prone, or as in one case seated, no spasms existed; but when the upright posture was assumed there was general convulsive motions, sometimes persisting, sometimes not.

4. *Genital Irritation as a Cause of Nervous Disease, etc.* HAMILTON. (*Am. Jr. Med. Sc.*, Oct., 1876.)

"Continual morbid peripheral irritation sent from the genitals, either to the bladder, cord or medulla oblongata," may cause any of the following symptoms; paresis, including paraplegia; paresis of the muscular fibres of the bladder; disturbed sensation—hyperæsthesia, anæsthesia or dysæsthesia; priapism, local hyperæmia; choreic movements, transitory contractions; loss of consciousness, impaired memory, irratibility of temper, melancholia and dementia. Many or few of these symptoms may co-exist. In children congenital defects and bad habits, and in adults venereal excess, and more rarely stricture and urethral difficulty, seem able to cause them. Sayre has reported ten cases of children who suffered with some of these symptoms. Six of the patients were between three and four, two were two and two were five years old. Eight were boys and two were girls. "In the boys there was generally congenital phymosis with agglutination of the prepuce and glands; in the girls an elongated and inflamed clitoris. Symptoms of want of power or in perfect locomotion, adduction of the lower limbs, atrophy of the muscles of the thighs and legs, incontinence of urine, and various mental disturbances of greater or less gravity, such as hysterical laughter, irritability of temper, or imbecility, were also presented." Operation was followed by recovery in from a few hours to as many weeks.

Dr. F. H. Brown, of Boston, had a case of paraplegia in a boy of ten. There was incontinence of urine. A severe balanitis with preputial constriction existed. Recovery was rapid after circumcision.

Dr. H. relates a cases of a boy of seven, well nourished and rosy. There were irregular convulsions in the lower extremeties when recumbent. There were choreic movements of the arms. When held up he was unable

to stand, not from paresis but from lack of power of co-ordination; the legs became rigid and the toes adducted. He was unable to speak, but made "queer sounds," and he had choreic movements of the face. There was no imbecility and he seemed fearful of being hurt. His functions of nutrition were perfect, and he slept well.

He had congenital phymosis, the prepuce being firmly attached to the glans; the preputial orifice was small and surrounded by a rigid ring of toughened skin. Titillation did not cause immediate erection, nor increase of spasmodic movements. There was no sensitiveness to pressure along the spine.

Another case was that of a pale delicate girl of five who had never been able to stand. Intelligence was unaffected, no atrophy of the legs existed, nor was there lack of sensation and proper temperature. On being held upright the legs became stiff and the toes crossed each other, and one foot seemed inclined to cover its fellow. The heels were drawn up from contraction of the sural muscles. On lying upon her back the thighs were always flexed upon the pelvis, and in this position she slept. When sleeping, too, the head was drawn back by the trapezius and other muscles. The clitoris was large, cyanotic and erect. There was no history of worms.

The third case was a boy of seven. From early infancy he had had convulsion at varying intervals. They were short, the pale stage was absent and they were not followed by sleep. The bodily condition was good. A phymosis and contracted preputial orifice existed. There was no incontinence of urine.

The fourth case was a well developed boy of nine, of nervous temperament. The birth of this child was by a protracted labor and use of forceps. When two or three days old he had convulsions. He only began to talk at three years, and then with much difficulty. A year later he began for the first time to stand alone and to walk. There was no history of painful erections, but there was nocturnal incontinence. The whole body manifested choreic movements, as in the first and second cases above quoted. This was most manifested on his attempts at standing. He had phymosis, the preputial orifice only admitting a small probe.

Dr. H. infers that in these cases and cases like them, the convulsive movements, especially of the lower extremities, the spastic contractions of the flexors of the thighs and legs are connected with some irritation of the glans or clitoris; that usually in children beyond the irritability there are no mental symptoms; that exaggerated power is the rule and atrophy the exception; and that inco-ordination is common.

5. *Metrical Weights in Prescriptions.* MAISH. (*The Med. and Surg. Reporter*, Sep. 9, 1876.)

M. thinks that the difficulty of introducing this most useful and desirable system of weights in our prescription writing is due chiefly to the alteration of values which it would compel us to learn. The identity of the system with our decimal monetary system will, he thinks, make it naturally convenient.

The metrical system is now used in medicine and pharmacy as well as as in the physical sciences in nearly all civilized nations except those speaking the English tongue.

The pharmacopœias of Continental Europe express all quantities by weight, be the material liquid or solid. This is by far the best way, and once learned is most accurate and convenient. "The difficulty of writing prescriptions by weight instead of measure" has been overestimated.

Of the officinal liquid preparations prescribed for internal use, the alkaline solutions, the dilute acids and solutions of some of the salts (ammon. acet., potass. cit.) about equal in bulk an equal weight of distilled water. Tinctures and fluid extracts differ more from water and among themselves. Ether (sp. grav. .750) has a volume 1⅓ time its weight of water—three parts by weight of ether occupy the space of four parts of water. The relations of weight to volume of spts. eth. nit. (sp. gr. .837) and spts. eth. comp. (sp. gr. .815) is nearly as 4:5; of glycerine (sp. gr. 1.25) as 5:4; of syrups nearly as 4:3; of chloroform (sp. gr. 1.48) nearly as 3:2.

Remembering the relative density of officinal liquids, prescribing by metrical weights is easy. For all practical purposes one gramme is equal to 15 grs., one fluid ounce of water equals (within eight grs.) 30 grammes. 15 grammes of water, or its equivalent in other fluids, is to be taken as equal to a tablespoonful; 7.5 to 8 grammes to a desertspoonful and 3.7 to 4 grms. to a teaspoonful.

Applying these values to the heavier and lighter liquids it will be seen that

$15 \times \frac{3}{4} = 11.25$ grammes ether, $15 \times 4.5 = 12$ grms. spts. ether, nit.

$15 \times 5.4 = 18.75$ grms. glycerine, (or comp.)

$15 \times 3.2 = 22.50$ grms. chloroform, $15 \times 4.3 = 20$ grms. syrup,

Are in measure equal to about half a fluid ounce, and that the deviation from this measure is in each case considerably less than the difference in the amounts obtained by scant and full measurement with the same teaspoon, or between different patterns of that very useful domestic utensil.

The average dose of these liquids, expressed in metrical weights, are therefore:

Ether,	11.25:8 = 1.40 grms.	or ½ teaspoonful.
Spts. Eth. c. or n.	12.00:4 = 3.00 grms.	or 1 teaspoonful.
Chloroform,	22.50:8 = 2.80 grms.	or ½ teaspoonful.
Glycerine,	18.75:4 = 4.70 grms.	or 1 teaspoonful.
Syrups (some),	20.00:4 = 5.00 grms.	or 1 teaspoonful.

For conversion of grain weights of solids into grammes, close enough approximations are made by dividing the number of grains by 15.

The smallness of the error is seen by the following:

grs. lx	give	60-15 = 4.00,	absolutely 3.887,	difference	1¾ grs.
℥ j	give	480-15 = 32.00,	absolutely 31.100,	difference	13 9-10 grs.
gr. x	give	10-15 = 0.66,	absolutely 0.648,	difference less than	1-5 gr.
gr. viii	give	8-15 = 0.53,	absolutely 0.518,	difference less than	1-5 gr.
gr. iij	give	3-15 = 0.20,	absolutely 0.194,	difference less than	1-10 gr.
gr. ij	give	2-15 = 0.13,	absolutely 0.129,	difference nearly	1-65 gr.
gr. j	give	1-15 = 0.066,	absolutely 0.065,	difference nearly	1.65 gr.

In prescribing, the quantities should be expressed in grammes and decimal fractions thereof, no signs or abbreviations being necessary.

Following are sample prescriptions written in the usual manner with their metrical equivalants attached. The author thinks it must be apparent there is less liability to error by using the latter method.

℞	Pot. iodidi	ʒ ij	8.00		
	Iodini	gr. ij	0.13		
	Aquae	f ℥ ss	15.00		
	Syr. sars. c.	f ℥ iiiss	140.00		

Dose, one tablespoonful, containing one gramme (15 grs.) pot. iod. and 0.016 (¼ gr.) iodine.

℞	Potass. Nitrat.	ʒ iss	6.00		
	Vini Antim	m. xl	2.66		
	Tr. digitalis	f ʒ i*	3.50		
	Mucil. acaciæ	fl ℥ ss	20.00		
	Aquæ	f ℥ iij	90.00		
	Syr. Aurantii	f ℥ j	40.00		

A tablespoonful of this mixture contains 0.66 (10 grs.) potass. nitrate, 0.0012 (1-54 gr.) tartar emetic and 0.055 (5-6 gr.) digitalis.

℞	Morph. sul	gr. i	0.066	
	Pulv. digitalis	gr. vi	0.40	
	Sacch. alb.	℈ iss	2.00	

M. Div. cht. No. xii.

Each powder contains 0.0055 (1-12 gr.) morph. and 0.033 (½gr.) digital.

℞	Quin. Sul.	gr. xii	0.80	
	Pulv. opii	gr. iii	0.20	
	Syrupi	q. s.		

Fiant. pil. No. xii.

Each pill contains 0.066 (1 gr.) quinia and 0.016 (¼ gr.) opium.

℞	Atropiæ	gr. ss	0.033	Atropia ointment.
	Alcohol	q. s.		
	Adipis	ʒ j	4.00	M.

6. *Multilocular Cerebro-spinal Sclerosis.* GERHARD. (*Phila. Med. Times*, Nov. 11, 1876.)

In remarks upon this disorder G. says the lesion consists in the development of sclerotic patches or islands in the substance of the brain and cord. The islands are irregular in form, and in the cord are scattered, generally, throughout its whole length and without respect to its division into columns and gray matter. Some preference is shown, however, for the antero-lateral columns. In the brain the gray matter of the convolutions usually escapes; the most frequent parts effected are the walls of the lateral ventricles, the septum lucidum, the pons and floor of the fourth ventricle.

The morbid change is a localized hyperplasy of the normal connective tissue, and, through pressure and absorption, a substitution for the nervous tissue proper.

The most marked symptoms are increasing loss of power in the extremities and a peculiar tremor occurring only with voluntary movement. There are also vertigo, frequently a peculiar difficulty of articulation, some disturbance of vision, nystagmus, and a characteristic facies. The tremor

* Representing 7½ grains digitalis; menstruum diluted alcohol. (This tincture to water is as 7:8.)

is peculiar. It is usually preceded for some time by the weakness, but not always so. It does not exist during repose of the muscles. It is large and rhythmical like the movements of chorea.

The trembling of paralysis agitans is unlike that of scattered sclerosis in being constant, and lessened instead of increased by voluntary effort. In sclerosis of the posterior columns or progressive locomoter ataxia, while the movements are irregular as is the disease being considered, they are always exaggerated and more wild on closure of the eyes; in insular sclerosis a patient with his eyes closed, being told to put his finger on a given spot on the face is perfectly able to do it notwithstanding the violent tremor.

The paralytic symptoms develop slowly; they begin usually in the lower extremities, one alone it may be. The paralysis of the lower extremities may in years become complete; in the upper limbs it seldom does, and the sphincters are rarely involved. There is seldom any loss of sensibility. Treatment has been almost useless. Corrosive sublimate in small doses long continued has given transitory benefit, so has nitrate of silver, and increasing doses of hyoscyamus have lessened the tremors.

Four cases are reported. In the first—a man of fifty-seven—the loss of power in the legs began seven years before. A year later the arms began to fail in strength, and then was there first noticed tremors or movements in all the extremities. Later his speech was effected, and in three years he was unable to work. The patient walked with a cane, moved slowly and with difficulty could raise the feet from the floor. There was no muscular wasting, or loss of sensibility or electrical response. The mind was impaired, the speech thick and deliberate, the eyesight poor and beginning atrophy of the fundus.

In case two there was the same order of occurrence of the weakness but the tremor began in the upper extremities. There was giddiness and the face was drawn to one side. There was no speech difficulty. The weakness and tremors were the cardinal symptoms.

Case three differed from the preceding in that the muscular trembling was noticed before the weakness. The gait was shuffling, and there was a tendency to festination. There was occasional vertigo and the eyes were normal.

In case four there were the typical symptoms, and in addition a condition of half idiocy. There was a subjective feeling of numbness, but the æsthesiometer proved the sensibility to be quite normal.

7. *The Cure of Diphtheria.* CIALTAGLIA, of Rome. (*Lancet*, Oct., 1876.)

Dr. C. reports eight cases to illustrate his flattering success with the use of large doses of chlorate of potash internally and hydrate of chloral locally in this affliction. All these cases recovered. The chlorate of potash is administered in solution of 20 grammes to 140 grammes of water —a tablespoonful being given every one to three hours, according to the age and severity of the case.

The chloral is dissolved in glycerine (four to twenty grammes respec-

tively) and the diphthertic spots are touched with the mixture three or four time daily.

"The moment the chloral and glycerine was applied the false membranes ceased to spread, while the characteristic fetor from the mouth entirely disappeared on the first, or, at latest, the second day of application."

8. *Nestlé's Food for Babies.* PUTNAM. (*The Boston Med. and Surg. Jour.*, Nov. 9, 1876.)

Nestlé's Lacteous Farina, made in Vevey, Switz., is claimed to have some advantages over the other numerous preparations of food that are in use here, namely: Its dry form and the mode of preparation for use—water only being used. The food consists almost entirely of milk in the form of powder, and is mixed with bread baked for the purpose from the best flour. The crust being the most nutritious part is alone used. The milk is obtained fresh from the dairies; after having been tested it is received into steam heated vessels, and condensed in a partial vacuum at a nearly uniform temperature, not above 120° F. The product of this is a fine powder of milk and bread crust.

Lebert, on examination, found grains 1-12500 of an inch in diameter, and fragmentary parts of starch. The food is easily prepared for use, one part is mixed with from six to ten parts of cold water, which is then boiled while stirring. Any unskilled hand may prepare it.

Ehrendorfer, of Vienna, has reported 20 poorly nourished and 40 sick children averaging from five to twenty months old. Fifty-one of these continued to take the food until they were well, while the balance of them discontinued its use, either because they disliked it or because they failed to improve.

Ehrendorfer claims that the food is especially valuable in all cases where the mother's milk is not sufficient in quantity, and in diarrhœal diseases caused by weaning. The author's experience with the food is essentially the same as that of Ehrendorfer, and he concludes by saying that "generally it was well liked and well borne, occasionally it was not retained by the stomach or was not liked by the baby." W. F. L.

II. SURGERY.

1. *A New Method of Examining the Affections of the Vocal Cords.* KLEMM. (*Arch. d. Heilk*, No. 6, 1876.)

The readiness with which a small flame is set into motions by the vibrations of the air has been utilized by Dr. Klemm for taking photographs, as it were, of the normal and abnormal vibrations of the vocal cords. His apparatus consists of, 1, a large cube rotating on a perpendicular axis, with its four vertical sides lined with glass mirrors; 2, a gas burner terminating in a fine point, so as to give a very small pointed light. To this burner are attached a wide speaking tube of rubber and another rubber tube

which furnishes the gas. The speaking tube and gas tube are separated by a very delicate membrane of caoutchouc. Any tone spoken or sung into the speaking tube sets this thin membrane in vibrations, which are communicated to the gas and the light; the light thus responds to the feeblest vibrations of that membrane. The cube is placed about eighteen inches in front of the light, and the room is darkened. If the cube then is made to revolve with moderate speed on its perpendicular axis, the quiet light reflected by the glass mirrors gives the observer the impression of a continuous light streak; but if the light is moved by the vibrations of a tone sent through the speaking tube, flashes shoot up from the light streak in regular intervals. These flashes have a very regular shape, like the long sharp teeth of a saw, and are separated by regular narrow, but deep, indentations. The shape and height of these light teeth depend, 1, on the pitch of the tone uttered; 2, on its power; 3, on the vowel uttered; 4, on the quality of the voice. As the first three conditions can easily be controlled and made uniform for a series of observations, we can from the images of the light teeth draw certain conclusions concerning the vibrations of the vocal cords.

In a series of drawings executed by a skillful artist, the salient features are illustrated in the images produced by normal and abnormal vibrations of the vocal cords. The high tones of the musical scale produce single long teeth; by middle tones these teeth are split in two, each pair of teeth being separated by a deep indentation from the next one, and the lower tones are characterized by groups of three or four teeth; but all these teeth ending in a sharp distinct point. By a moderate degree of hoarseness the points become blunted, the teeth broader and shorter, and the indentations shallower.

The pictures of very hoarse voices show a great irregularity of the teeth in length and width, so that the light streak resembles a row of fringes; and in a case of excessive hoarseness (as due to paralysis of the vocal cords) the teeth become so short and indistinct that the whole streak looks more like a scalloped ribbon.

2. *New Method of Curing Phymosis.* GRIFFITH. (*British Med. Journal*, No. 823.)

Three cases of phymosis are reported in which the surgeon did not perform any of the usual operations, but enlarged the aperture in the prepuce by distention. This dilatation may be effected rapidly, in one sitting, especially if we do not mind splitting the mucous lining of the foreskin, or it is accomplished gradually in two and more sittings. In the first case the patient had a very slight stricture of the prepuce, which was effectually dilated by means of a forceps something like the ordinary uterine dressing forceps. The pain was very trifling. In the two other cases the patients had never been able to uncover any part of the glans except the very mouth of the urethra. These cases were cured by gradual dilatation, which the doctor describes thus: "I grasped the penis with the fingers of both hands, and partly by retracting the foreskin, partly by projecting forward

the glans penis, I commenced this wedge-like dilatation, and soon had the satisfaction of seeing an area of surface around the mouth of the urethra." This procedure was repeated every other day until the phymosis was cured so as not to be likely to return. An injection of some oil under the foreskin, previous to each sitting, seems to facilitate the dilatation and to shorten the whole treatment.

3. *Boracic Acid as an Ordinary Dressing for Wounds.* CANE. (*London Lancet*, Aug., 1876.)

The writer calls attention to the use of boracic acid as a *simple* dressing, altogether apart from the antiseptic system, for all kinds of wounds. While the advantages of Mr. Lister's method are acknowedged, Dr. Cane claims that we want something which, while it has to a certain extent the merits of Lister's method, is without those tedious details, and which can be readily used without assistance.

After an extensive trial of the acid for some months, the author has secured better results than from the ordinary methods of dressing. The most convenient forms for use are the boracic lint, cotton wool, a concentrated watery solution of acid, and boracic ointment.

Boracic lint is prepared by soaking lint in a saturated *boiling* solution of the acid. Upon drying the lint a deposit of fine, flaky crystals takes place between its fibres. Cotton wool is similarly prepared, and when dried and picked out forms a very useful dressing. The concentrated solution is made by dissolving the acid in boiling water to saturation. The ointment is made by rubbing down one drachm of the acid with one ounce of simple ointment or benzoated lard. Boracic acid, unlike most antiseptic agents, is blank and unirritating, but being non-volatile it is less useful in some cases than carbolic acid. The author recommends the boracic lint to be used in a dry state. I have, however, seen it used in a wet state by Prof. Gunn, of this city, in the case of a compound injury of the ankle joint, with the most gratifying result.

Dr. Cane has found the acid very useful in skin grafting. The surface to which the grafts are to be applied is first well cleansed by applying the boracic lotion some days, till the discharge is free from putrefactive ordor. The skin from which it is intended to take the grafts is also well washed with the lotion. The grafts are applied to the raw surface in the usual way, after which they are protected by strips of gutta percha tissue dipped in the boracic lotion, and a piece of boracic lint placed over all.

4. *A Simple Mode of Extracting Calculi Arrested in the Urethra.* WILL. (*London Lancet*, Aug., 1876.)

Dr. Will succeeded, in two cases, by means of a silver wire, in removing calculi arrested in the urethra. One case was complicated with stricture. A loop of tolerably thick silver wire was passed through the stricture and behind the calculus. After some manipulations the latter became engaged in the wire loop, and although slipping from the loop more than once, was finally withdrawn. The second case was that of a child, the calculus having lodged in the bulb of the urethra.

5. *Removal of a Button from the Bronchus.* (*London Lancet*, Aug., 1876.)

The patient, aged 13 years, accidentally slipped the button into his trachea, April 23d, where it remained without producing very serious symptoms until May 11th, when it fell into the left bronchus, producing symptoms of collapse of the lower lobe of the lung. Mr. Maundee having performed tracheotomy, first inverted and shook the patient, but without success. He then placed the patient on his back and pressed through the wound into the left bronchus about seven inches of looped silver wire, and was successful in withdrawing the button, together with a quantity of muco-purulent matter. The urgent symptons disappeared.

6. *Embolism of the Pulmonary Arteries in Consequence of the Application of Elastic Bandages to the Lower Extremities.* MASSARI. (*The Boston Med. and Surg. Jour.*, June 29, 1876.)

* The bandages were applied after confinement in which the patient, in consequence of placenta prævia, had become extremely anæmic. The symptoms of anæmia disappeared remarkably quickly and returned again immediately, when, in consequence of violent pain, the bandages were twice loosened, for a short time. Their third removal, thirty-two hours after delivery, was followed by sudden collapse, dyspnea, violent heart beats, and death in two hours, in spite of a re-application of the bandage s Clots were found in the pulmonary arteries of the third order, and similar ones in the varicose saphena veins. The author regards the bandaging as the cause of the coagulation, and considers its employment contra-indicated by a varicose condition of the veins. He also gives a caution against the too prolonged application of the bandages.

7. *Extirpation of the Parotid Gland by the Galvano-Cautery.* (*Med. and Surg. Reporter*, Sept. 2, 1876.) [Translated by Jno. B. Roberts, M.D., of Philadelphia.]

The patient, a man aged 58 years, had had, for nine months, lancinating pains in the left ear, radiating over the whole side of the head. There was some paralysis of the face. When the patient opened the mouth he became aware of a mechanical impediment between the jaw and the ear. Prof. Carradi diagnosed a tumor of the parotid gland, either carcinoma or enchondroma, compressing the left facial nerve, and decided upon extirpation of the gland. In order to avoid hæmorrhage and have the field of the operation clear, the galvano-cautery was employed. A vertical incision was made, extending from the zygoma to a point below the angle of the jaw, being almost half an inch in front of the attachment of the external ear; a second incision started from the lower angle of the masseter muscle and reached the mastoid process. These cutaneous wounds having been dried, a steel knife, made white hot by the galvanic current, was employed and the whole gland was separated from the surrounding tissues from below upward. During the last part of the dissection, the external

* Translation.

carotid having been exposed, two ligatures were applied and the vessel divided.

At the end of 20 days the patient was well, but the paralysis of the left eye and side of the face persisted. Subsequently a swelling of the left lateral region of the neck appeared, showing a recurrence of the disease, which the microscope had proved to be scirrhus.

8. *A new View of the Pathology of the so-called Phlebitis.* NANCUDE. (*Philadelphia Medical Times*, Aug. 19, 1876.)

As to the pathology of so-called phlebitis, this paper supports the theory that thrombosis is the primary affection, the inflammation being secondary in the order of occurrence. The author, as well as some of the modern pathologists, denies the existence of adhesive inflammation of the veins, as indicated by an effusion of plastic lymph upon the intima, causing a secondary thrombosis. The experiments of Gendrin long obtained credit and gave support to the doctrine of adhesive phlebitis till Lee and Callender proved their inaccuracy. Frances showed by specimens that veins after ligature or division repaired without adhesive inflammation.

It is difficult to conceive of a non-vascular tissue, such as the intima, initiating inflammatory changes. Then, too, some lymph effused, it is not easy to understand how it could remain in its soft semi-fluid condition attached to the vascular walls long enough to form false membrane, or by its roughness to indicate coagulation of the blood. On such grounds the author feels compelled to strike out the term phlebitis and substitute that of thrombosis.

Dr. Nancude's "New View of the Pathology of Phlebitis" is based upon the demonstrations of Alex. Schmidt, to the effect that fibrine, as such, does not exist in the blood, but when a clot forms it is due to the union of two substances always present in the blood, namely, fibrino-plastic and fibrinogen. The former is present chiefly in the blood cells, and the latter is the result of the retrograde metamorphosis of tissue, and is found in the serum. Before these observations were published there was no satisfactory explanation of the so-called hypermosis, so constant an attendant in rheumatic fever, traumatism, pneumonitis, and in the puerperal state. Increased tissue waste with inadequate action of the secerning organs result in an immense excess of the fibrino-genetic material. Particularly is this the case in the puerperal state, where we too frequently see thrombosis, and where an enormous mass of uterine tissue is absorbed in the short space of six weeks, the greater part of this absorption taking place during the first ten days. Under these circumstances it must be evident to what degree the blood is surcharged with fibrine-forming substance.

The views usually entertained concerning the immediate cause of the thrombosis really amount to nothing, for they refer us to some unknown condition of the system. The author claims that his own views of its causation render it perfectly plain. In all cases of this affection the wound is eminently unhealthy, and it is therefore in a condition that

favors the absorption of the products of retrograde metamorphosis; that is one factor. The other is that in natural hæmostasis, after any lesion of continuity, we have a clot sealing the opened ends of the vessels. When the retrograde products reach the plugged vein by the next uninjured collateral, they meet here the fibrino-plastic substance in the hæmostatic plug, and we have a thrombus formed, extending toward the heart. The next collateral above brings in fresh fibrino-genetic matter which meets the thrombus and it again extends. The clotting ceases only when no more collateral veins pour in blood coming directly from the disease focus, and therefore loaded with fibrino-genetic matter.

Post mortem reports* furnish evidence which sustains the views herein expressed, the clot always ceasing when no more impure blood is poured directly into the affected veins, rather than where the main vein joins the diseased one according to most writers. The paper concludes with a consideration of the practical bearing of this new pathological view on prophylaxis and treatment, viz.: To remove or render inert all dead or dying tissues and inflammatory products, and avoid caustic and irritating applications likely to chemically or mechanically injure the granulations; thus rendering them capable of absorbing.

Mr. Lister and his adherents think that the excellent results of the modern management of wounds are owing to the destruction of microscopic organisms; Dr. Nancude to the rendering inert retrograded substances, and to the prevention of such retrogression, in conjunction with the avoidance of any injury whatever to the granulations.

9. *Fracture of Cranium Dating Back 30 Years; Persistent Fistula; Integrity of Cerebral Function for 30 Years; Signs of Compression; Trephining and Cure.* CRAS. (*L'Union Médicale*, No. 153.)

Last October the reporter was summoned to a patient in a state of profound coma, with purple features, relaxed limbs, stertorous respiration and pulse between 120 and 130. The forehead was evidently protruding and was the site of a cicatrix traversed by a fistula. The patient's wife informed the surgeon that the cause of this fistula was a fall which the husband had many years before. This had produced a wound which had completely healed, but had always discharged a little matter. For four or five years afterward the husband had suffered greatly; his intellectual faculties, formerly unimpaired, became weakened. She had noticed the occurrence of crises which coincided with the cessation of the discharge from the frontal fistula. Cras applied Vienna paste and explored the fistula for several millimeters without encountering denuded bone.

At evening the incision of the eschar gave exit to an abundant discharge of viscid pus, under the influence of which the patient recovered consciousness and gave full details of his case, stating that the accident had occurred 38 years before. For five years he had been unable to labor. Suffering as he did from persistent cephalalgia with progressive amnesia,

* Holmes' System of Surgery, vol. iii., p. 361.

left hemiplegia and frequent accesses of fever. During the preceding 18 months his health had been worse than heretofore.

Cras decided that a large purulent collection was compressing the right hemisphere, and in spite of the amelioration already produced, and in the face of much opposition from the patient's family, insisted upon further operative procedure.

Local anæsthesia was induced by the employment of ice and sea-salt, when the operator (Jules Richard assisting) denuded the frontal bone to the entire extent of the fistula by means of an incision, involving all the superficial tissues and periosteum. The wound being dried, a large trephine was applied and made to penetrate slowly the thickened layers of the hypertrophied frontal bone. The instrument was succeded by the gouge and mallet, which were necessary to remove the superficial layers of the bony disk, when the trephine was re-applied, and at last its inferior segment had tapped the inferior wall of quite a large cavity, which gave exit to several drops of pus immediately. With a few more turns of the instrument the disk was loosened and the elevator, introduced at once, broke away a long bony plug. At the same time a stream of greenish pus bathed the face of the patient, the exit occurring by jets synchronous with the beating of the pulse. The quantity thus escaping measured 250 to 300 grammes.

The cavity was washed out with tar emulsion and the wound dressed with charpie, the patient exhibiting a remarkable return of intellection.

After some delays the case progressed with astonishing results. The intelligence was perfectly restored, the patient soon reading, writing and attending to his daily affairs. Meantime a small silver cannula was kept in the wound as a drainage tube, 1 mm. in diameter. One year afterward the patient still wore, by way of precaution, a small cannula, which was left open at night, and which contained only three or four grammes of a clear limpid fluid. The restoration of muscular vigor was proportioned to the cerebral energy.

"It was a true resurrection," concludes the author, "and when I saw him lately jump leisurely into a tilbury, and drive a spirited horse with one sure hand, I experienced a genuine satisfaction in thinking of the wretched and blinded imbecile transformed so happily by the intervention of surgery."

10. *Luxation of the Foot Backward.* COURBIS. (*Lyon Médical*, No. 48.)

A young man who was engaged in play with older and stronger companions accidentally fell to the ground upon the back, while his left foot was engaged beneath the body of his adversary who also fell. The foot was thus forcibly extended.

When examined, immediately after the accident, little swelling had occurred. The dorsum of the foot was slightly shortened by reason of the propulsion forward of the tibio-fibular articulation. The anterior articular edge of the tibia projected to a marked degree, and had ridden over the

astragalus, from which it was separated by a very distinct depression. The foot was at right angles to the leg, without deviation to either side.

The two malleoli displaced forward projected moderately, especially on the internal face of the member—the moderate swelling elsewhere masking this feature. The fibula was not fractured.

Posteriorly the injured limb offered a striking contrast to that which was unaffected. The heel seemed to be enlarged in consequence of the displacement forward of the malleoli. The tendo Achillis, which had partly followed the tibia, formed a curve, whose concavity was posterior, and was much more marked than on the opposite side. Tracing the course of each side upon a sheet of paper and describing a vertical line at right angles to the sole, is was found that the greatest distance between the arc and the chord of the sound side was 17 mm., while the greatest distance between the points on the side of the luxation was 39 mm.; showing that the tibio-peroneal displacement was at least to the extent of 24 to 25 mm.

The looseness of the union between the tendo Achillis and tibia shows that the real displacement of the bone is somewhat more considerable than is indicated by the tracings.

Movement of the part was restricted to slight flexion, and extension accompanied by intense pain.

Anæsthesia having been produced, the reduction was readily affected by seizing the heel with both hands, while the thumbs pushed back the two bones of the leg. The injured limb was then placed in the silicated dressing, though there was no tendency to reproduce the displacement. Result: Complete recovery.

The interesting points in the case were, (*a*) the rarity of the lesion. (Malgaigne collected but 18 cases of this kind.) (*b*) The absence of fracture described by many authors as well nigh constant. (*c*) The readiness of reduction, due to the anæsthetic and absence of fracture. (*d*) The mode of production of the injury—forced extension of the foot upon the leg and forward movement of the tibio-peroneal body.

11. *Extensive Compound Fracture of Skull and Loss of Brain Substance. Recovery.* SLOCUM. (*The Med. Record*, Dec., 1876.)

An extensive compound comminuted fracture of the skull, with escape of brain substance, and severe hæmorrhage from the middle meningeal artery, happened a lad of 15 years. He remained in a comatose condition for 15 hours; after which time co-extensive symptoms of concussion and compression were developed. Operation was made 22 hours after accident. Found fracture involved right parietal bone in its posterior inferior edge and angle, extending into occipital. Two of the largest fractured pieces, measuring $2\frac{5}{8}$x$1\frac{1}{2}$ inches, were turned inward pulpifying the brain substance to a depth equal their width. The wound discharged freely of the broken brain during and after the operation. The end of the third week the hemisphere had "settled back to its normal position, followed by the scalp," leaving a depression of an inch. The mental faculties, though slow in action, were in a measure restored. The author

concludes by saying: That this case argues against the policy of non-interference, and that an opening through the scalp and skull, sufficient in size to allow the entire escape of fluids, should be left. W. F L.

12. *On the Use of the Balsam of Peru.* WISS. (*Deutsche Med. Wochenschr.*, 1876, No. 48.)

In a paper read before the Berlin Medical Society, Dr. W. summed up his experience with the Peruvian balsam as follows:

The balsam, at first moment when applied to the wound, causes a slight burning, but afterward all pain ceases, even in the most severe and painful wounds.

Fresh wounds never inflamed under this treatment; and in inflamed wounds the inflammation quickly subsided.

The balsam prevented supperation, and putrid decomposition was not observed in a single case, notwithstanding the most unfavorable local and climatic conditions under which the patient had to live.

Even lacerated wounds showed a great tendency toward healing by first union. One night the doctor was summoned to attend a young man whose scalp had, by some blunt instrument, been torn into three flaps, so that the skull was laid bare to great extent. The bleeding arrested and the wound cleaned, Peruvian balsam was freely applied on the raw surfaces, which then were dressed with a simple compress. The next day the wounds were healed except a small spot in their center which also closed up in a few days, without the discharge of a drop of pus.

The anti-purulent property of the balsam induced Dr. W. to test its efficiency in cases of chronic pulmonary catarrh with a copious muco-purulent secretion. He gave the balsam in an emulsion of the yolk of eggs (℥ j ad ℥ iv, a tablespoonful every two hours). Two elderly persons afflicted with chronic blennorrhœal bronchitis for several years, were completely and permantly restored, the one within ten days and the other within three weeks.

III. OBSTETRICS AND GYNÆCOLOGY.

1. *Fatal Hæmorrhage in the Case of a Pregnant Woman affected with Varix.* POLAILLON. (*Gaz. Obstetric*, October 5, 1876.)

A young woman, twenty to twenty-five years old, by occupation a laundress, was in the habit of walking every morning from Gentilly to St. Jacques, though affected with varicose veins of the legs. One morning, after her usual walk, she noticed blood escaping from a wound in the leg. The hæmorrhage becoming abundant, she was placed on a litter and carried to the Maternity Hospital, but died before arriving in the ward.

A living child was extracted by the Cæsarean operation, but died a few instants after. A small circular wound was discovered over the internal malleolus of the mother, whence the hæmorrhage had proceeded. The

garters surrounding the limb above the knee had produced there a marked constriction.

Instances of this sort are rare, but yet have been noted. P. had observed one case a few years before, where death resulted in the case of a woman who injured a varix of the leg upon the step of a stair which she was ascending.

Cazeaux cites an analogous case of hæmorrhage from the labia majora, which resulted in death. A varicose vein of the vulva had been ruptured, and it was believed that the hæmorrhage came from the uterus. In the discussion of this case before the Société de Médecine, it was thought that the albuminuria of pregnancy might have some etiological significance in the explanation of the fatal issue, as well as the myo-carditis, which is relatively frequent in the puerperal state.

2. *Active Hæmorrhage produced by Coitus.* CRANDALL. (*Med. and Surg. Reporter*, October 28, 1876.)

The patient was thirty-five years old, and had been married three weeks. She had been flowing profusely since the first coitus, and was getting very weak. An examination (with speculum) discovered the blood to come from the inside of the uterus. This organ in position, shape, size and appearance was normal. It was learned that she had just ceased menstruating when this first sexual act occurred, and it was inferred to be a case of "intra-uterine hæmorrhage, produced by coition taking place soon after the menstrual flow had ceased, and while the ovaries and uterus were in a highly congested state."

Ergot and gallic acid in liberal doses failing to at all lessen the flow, the tampon was resorted to, when, this failing, the unguentum ferri was applied to the intra-uterine walls with Burnes' uterine ointment positor. This stopped the flowing, and the recovery was only retarded by a slight fever.

The author mentions another case of a similar sort, occurring several years previously, where a woman the next day after her marriage was attacked with a hæmorrhage while sitting at dinner, the flow being so profuse as to come "near proving fatal."

[A case has come to our knowledge recently where a first coitus in a young girl caused such a hæmorrhage as to frighten her paramour, and cause him to run to a doctor for some styptic medicine. From his description it must have been some solution of iron. On being applied to the orifice of the vagina, it quickly checked the bleeding, and we infer hence that the accident was a sudden rupture of the hymen. The young woman —an unusually vigorous person— was so much debilitated that she was obliged to keep her bed for several days.—EDS.]

IV. THERAPEUTICS.

1. *Glycerole of Nitrate of Bismuth.* SQUIRE. (*Pharm. Journal.*)

Dr. Squire finds that nitrate of bismuth is freely soluble in glycerine without the addition of water, and suggests its use as a bland and mild astringent in diseases of the throat, larynx, vagina, uterus and urethra.

J. S. K.

2. *Bromide of Potassium in Hæmorrhage.* (*New Remedies.*)

It has been asserted that this agent induces contraction of the blood-vessels, and Dr. Genenal (*L'Union Médicale*) has used a local application in the treatment of epistaxis, uterine hæmorrhage and coryza. It should also be given internally. In coryza two injections of a saturated solution into the nose give relief in an hour, and a permanent cure is effected in about six hours. J. S. K.

3. *Antidotes of Arsenic.* ROUYER. (*New Remedies, Canadian Journal.*)

R. as the result of many experiments publishes the following:

1. Hydrated sesquioxide of iron, recently prepared, (gelatinous and brown) is an antidote for arsenious acid, but not for arseniate of potash nor for the arseniate of soda.

2. At a longer interval than an hour it is useless to attempt recovery from poisoning by arsenic.

3. For arsenite of potash and arsenite of soda the author proposes perchloride of iron in conjunction with magnesia.

4. The mode of administration is the officinal solution of perchloride of iron, and half an hour afterward magnesia in the proportion of a drachm to 3¼ fl. ozs. of perchloride.

5. This of perchloride iron and magnesia is also an antidote for arsenious acid. Therefore, it is preferable to employ it always in cases of poisoning by arsenic or its compounds.

6. An hour after the administration of an antidote it will always be well to employ a purgative, in order to expel the ferrated arsenic which is formed, and as this arsenite is soluble in acids to avoid acid drinks and lemonades. J. S. K.

4. *Emulsion of Cod Liver Oil.* (*Druggists' Circular.*)

Cod liver oil	4 ounces.
Glyconine	9 drachms.
Aromat. spts. ammon.	1 "
Phosphoric acid dilut.	4 "
Essense bitter almonds	2 "
Sherry wine or brandy	16 "

Glyconine is made by adding five parts, by weight, of concentrated glycerine to four parts of yolks of eggs well beaten. J. S. K.

5. *Strong Solution of Salicylic Acid.* (*New Remedies.*)

Salicylic acid	ʒj
Potassium, sodium, or ammonium acetate	ʒj
Glycerine	ʒj
Water q. s. ad	℥j

Mix and dissolve by shaking. This solution contains one grain of salicylic acid in eight minims, and is largely used in Bellevue and other eastern hospitals. J. S. K.

6. *Bromide of Lithium.* (*Southern Med. Record.*)

Dr. Rouband writes in the *Revue de Thérapeutique* as follows of this drug: "1. Bromide of Lithium is a drug which has a twofold action. 2. It possesses in a high degree the lithontriptic qualities which are universally recognized in the salts of lithia. 3. It affects reflex sensibility in a more energetic manner than the other bromides, without the unpleasant effects upon the heart which the bromide of potassium has. 4. Consequently it takes its place in the first rank of antilithic and sedative drugs, and its action is especially valuable in cases of the uric acid diathesis which are accompanied by painful phenomena." J. S. K.

7. *Liquid Bismuth or Elixir Bismuth.*

The following is the formula adopted by the American Pharmaceutical Association:

Ammonio citrate of bismuth	256 grs.
Warm distilled water	1 fl. ounces.
Water of ammonia sufficient to neutralize simple elixir	15 fl. "

Mix and filter. J. S. K.

8. *Nitrite of Amyl.*

Nitrite of amyl has been tried, says the *Dublin Journal*, both in corea and intermittent fever. In corea inhalations of from 3 to 6 drops were order three times a day, arresting the convulsions in three cases at the end of two weeks. In intermittent fever it has aborted the chill and shortened the latter stages, but does not prevent a recurrence. Thirty drops have been administered as a dose with advantage in this fever. J. S. K.

9. *A New Anti-Pruritic Remedy.* BULKLEY. (*Trans. Amer. Med. Asso.*)

Dr. B. offers to the profession the following formula:

℞ Pulv. Gummi Camph. Chloral Hydrate.	aa	ʒj
Ung. Aquae Rosæ		℥j

M.

Rub the chloral and camphor carefully together till fluid results, then add slowly the ointment, mixing well.

This, when applied to the healthy skin produces no effect; but possesses great power in arresting itching without over stimulating the parts. It does not answer when the skin is at all broken; it is then necessary to employ other less irritating agents; but the burning sensation caused on its first application lasts but a few moments, while the relief occasioned will last for hours, or even a whole day. J. S. K.

10. *Pain Produced by Chloral Hydrate.* MORGAN. (*New Remedies.*)

M. writes to the *British Med. Journal:* "I have so frequently observed a peculiarity following the use of chloral, which I have not yet seen recorded in any medical book or periodical, that I feel sure that it will be interesting for others, to describe it. In several cases where I had given chloral hydrate in ordinary doses (generally where it had been continued for several days at least) a feeling of pain is experienced all over the body, sharper than that of chronic rheumatism, and often so sharp as to make the patient beg for relief. In each case I have found no relief obtained until the chloral was discontinued. It seems to me to be a general hyperæsthesia of the cutaneous nerves, but sometimes localized in one particular spot. Tincture of gelsemium gives relief to the pain sooner than other remedies." J. S. K.

11. *Salicylate of Quinine as an Anti-Pyretic.* BROWN. (*Edinburgh Med. Journal*, Nov., 76.)

In an article on the above subject, accompanied by four temperature charts, Dr. B. says:

This salt is unsoluble in water, but dissolves readily in certain acid solutions, and tolerably easily in cold, still better in hot, alcohol. In the cases in which it has been administered the dose has ranged from 10 to 40 grs., according to the age of the patient and the mode of administration; 30 grs. in most cases being sufficient. Its anti-pyretic action usually begins in about an hour if it has been administered by the mouth, and continues for some hours subsequently. In some cases the temperature has fallen as much as five degrees in the course of three or four hours. Simultaneously with this anti-pyresis the pulse becomes slower and softer, the respirations also diminish in frequency, the skin becomes cool and moist, and generally the condition of the patient is much improved. He expresses himself as cool and comfortable, and sleep usually follows.

The action of salicylate of quinine is free from the profuse sweating which attends that of salicylate of soda; and, on the other hand, the ringing in the ears and deafness which are occasioned by free doses of sulphate of quinine are hardly noticed after the administration of salicylate of quinine if an over dose be not given. The vomiting which large doses of sulphate of quinine so often produce is entirely absent after the exhibition of salicylate of quinine, nor has albuminuria ever been noticed.

With regard to the mode of administration, it may be given by the mouth either dry (in wafer paper) or suspended in mucilage or in water; but in severe cases, especially in enteric fever, it is best given as an

enema, suspended in mucilage, with a small quantity of laudanum to soothe the mucous membrane of the rectum. In this case its action is not so rapid as when given by the mouth, but in about two hours the effect becomes apparent. J. S. K.

12. *Salicin in Chronic Diarrhœa.* (*Am. Med. Bi-Weekly*, Jan. 6, 77.)

In a paper read before the Medical Society of the County of Kings, Brooklyn, N. Y., Dr. Mattison speaks most highly of salicin in chronic diarrhœa; quoting numerous successful cases of treatment.

The doctor considers salicin, tonic, astringent, antiseptic, and anti-fermentive, anti-periodic and finally alterative. It can be administered in pill, powder or solution. To adults in doses of five grains each four hours; to children under two years in doses of from one-half to two grains. Where improvement is not noticed within a week increased frequency of dose is advised. Careful attention to dietetic details and hygenic surroundings should always be observed.

The doctor commends salicin as a drug of unequaled power in chronic diarrhœa, and his success and earnest advocacy warrant a fair trial of the medicine by the profession. J. S. K.

V. Ophthalmology.

1. *A case of Acute Glaucoma, caused by one single instillation of Atropia.* Magnus. (*Klin. Monatsbl*, XIV, p. 386.)

A healthy farmer, aged 74 years, applied for the extraction of cataract. The examination showed a mature senile cataract in both eyes, normal anterior chamber, normal mobility of the iris, normal tension of the eyeball and a precise perception of light in every part of the visual field. As the patient was ready to undergo the operation the following day, Dr. M. put a drop of a solution of atropiæ sulphas in each eye, because he wished to examine carefully the cataracts when the pupil would be fully dilated. The patient, who lived in a suburb, returned home after the consultation. The next morning, however, he did not come back to town as he intended, but Dr. M. received a note from the farmer's wife, informing the doctor that about five hours after the instillation of atropia, the right eye had become very red and painful, and the patient was suffering such pain in the right side of his head that he was unable to leave the bed. Dr. M. suspecting the possibility of glaucoma, at once sent back the urgent order to bring the patient to him without delay. But the patient did not come till three weeks later; he had suffered the most agonizing pain all the while. The right eye showed the typical picture of acute glaucoma in that stage when the inflammatory attack is on the decrease. A complete dilatation and immobility of the pupil, a shallow anterior chamber, a marked vascular injection around the cornea, a great increase of the hardness of the eyeball, and a considerable limitation of the per

ception of light, the patient being able to perceive a large light only when held right in front of the right eye. The left eye showed the same condition as at the first consultation.

2. *Foreign body in the eyeball for fourteen years without disturbing the sight.* MARTIN. (*Receuil d'Ophthalmologie*, Oct. 1876.)

About five years ago an employee at a marble work presented himself to the doctor with pain, photophobia, lachrymation and redness of the left eye. He stated that every spring and fall of a good many years past, without any appreciable cause, he had been seized by similar attacks which caused him much pain and confined him to the room during a whole month.

The focal examination detected the presence of a dark rounded body, not larger than the head of a pin, resting on the crystalline lens and riding on the inferior outer border of the pupil. When the patient was informed of the presence of a foreign body in his eye, and he had given this matter a few moments' thought, he distinctly remembered that the first inflammation of his eye followed a contusion of the same by a piece of marble, that happened fourteen years ago, and ever since then the inflammation recurred every year. No sign of lesion could be found in the cornea. For the removal of the foreign substance, a broad linear incision was made through the lower external margin of the cornea and the aqueous humor was allowed to escape very slowly for fear lest the foreign body would drop down behind the iris. With a pair of forceps that body (which proved to be a triangular piece of black marble,) was easily seized and extracted. The iris protruding a little through the wound, a portion of it was excised to prevent the formation of a hernia of the iris. The pain left the eye, the wound healed kindly, the eye has never since been troubled and still has a perfect vision. It is very remarkable that in spite of those frequent attacks of recurrent iritis there were neither any posterior synechiæ nor any exudition on the anterior surface of the lens.

3. *Blepharoraphia Medialis.* ARLT. (*Wiener Med. Wochenschr.* 40, 1876.)

Under this name Prof. A. describes an operation for shortening the palpebral aperture from the inner canthus as the tarsoraphy does from the external canthus. He pares the free border of each lid from the lachrymal punctum to the inner canthus. The wounds thus established measure two to three millimetres in width and seven millimetres in length ; they meet at the inner canthus in an acute angle like the two lines of the letter V. Particular attention must be paid to a careful paring of this junction of the two wounds, else first union will not take place there, and an annoying fistula will remain. The slight bleeding arrested, three stitches generally are sufficient to bring the pared edges in perfect coaptation. To secure a kind healing the occlusion of the eye by a bandage during two or three days is advisable. Prof. A. finds this operation especially useful in cases of eversion of the lower lid, caused by paralysis of the facial nerve. In

those cases the lower lid (especially its inner or nasal portion) has sunken down a little and does not perfectly hug the eyeball any more. The sequelæ of this displacement of the lid, are epiphora and irritation or inflammation of the conjunctiva and cornea. In two such cases, Prof. A has performed the above operation with this result, that the lower lid was raised and its border was brought nicely in contact with the eyeball; and that with the readjustment of the lid the epiphora and other sequelæ were efficiently stopped.

VI. Syphilis and Venereal Diseases.

1. *Gonorrhœal Balanitis.* Darvosky. (*Memorabilien*, 1876, No. 10.)

The inflammation of the prepuce, caused by gonorrhœal virus, produces a great œdema of the prepuce and a copious secretion from its mucous membrane. We are often warned, under such conditions, not to draw the prepuce back for fear of inducing paraphimosis. Dr. D., on the contrary, insists upon drawing back the prepuce in order to thoroughly cleanse the parts, and to apply the medicine directly upon the inflamed surface. After all the secretion is washed off, the whole everted surface of the prepuce is pencilled over with a solution of nitras argenti (thirty grains to the ounce); a small piece of linen saturated with the same lotion is then laid over the glans penis, and the prepuce drawn over it. During the first days the gray eschar produced by this cauterization is very quickly thrown off, wherefore the application of the nitras argenti should be repeated several times daily. Afterward, when the œdema of the prepuce has subsided and the discharge is greatly diminished, the eschar adheres for one day or longer, and the remedy must not be reapplied till the eschar has been thrown off.

2. *Syphilis of the Cochlea.* Roosa. (*N. Y. Med. Record*, 1876, No. 47.)

In his "Treatise on Diseases of the Ear," 1873, Dr. R. stated that he had yet to see a case of recovery from syphilitic disease of the labyrinth. Since that time he has seen several cases in which very great improvement has resulted from an antisyphilitic treatment, carried out faithfully and thoroughly. As to the diagnosis, the doctor's own remarks may be copied here:

1. Disease of the cochlea, as of the other parts of the labyrinth, usually, although not always, manifests itself suddenly. The patient can definitely fix upon a time when he became deaf, and when he began to have *tinnitus aurium*. This is true even when one side only is affected. The one-sided deafness would not be so quickly recognized were it not usually accompanied by tinnitus, vertigo, and often by unsteadiness of gait. Sudden loss of hearing and the sudden occurrence of tinnitus, vertigo, and staggering, are not, however, entirely peculiar to labyrinth disease, since it is well known that we sometimes, although rarely, have the same symptoms in

cases of inspissated cerumen and catarrh of the middle ear. They are therefore only of pathognomonic value in connection with the objective examination and tests.

2. The tuning-fork is usually heard better or only in the sound or better ear. This would be a much more valuable test were the average powers of exact and objective examination better than we find them among our patients. The value of the tuning-fork is impaired by the willingness of even intelligent patients to believe that they hear all kinds of sounds, no matter how produced, better with the better ear. Then again, if both ears be affected, to nearly the same degree, the test has an extremely limited value.

3. The examination of the membrana tympani and the employment of the methods for inflating the middle ear, will usually give us reasonable conclusions as to the situation of a given disease of the ear, so that at the least we may exclude collections of fluid in the tympanic cavity in making a differential diagnosis between disease of the middle ear and of the labyrinth.

4. The piano, or any very similar musical instrument, will aid us in determining whether or not disease of the cochlea exists. The examination of cases that were unquestionably affections of the labyrinth shows that the power of appreciating low tones is the last to suffer, and the first to recover in most cases of disease of this part of the ear, so that these will be heard when the high ones are not heard at all, or if they are appreciated, they appear "*false*" or doubled. From our present knowledge of the physiology of hearing, when these symptoms are present, we must conclude that the cochlea is the seat of disease, even if it be secondarily affected.

5. The diagnosis of *syphilis* of the labyrinth depends in a great measure upon the same kind of evidence as that from which we conclude that a case of optic neuritis or choroiditis is syphilitic; that is to say, the history and the presence of other symptoms as eruption, mucous patches, etc. It should not be forgotten, however, that the occurrence of labyrinth disease, in a person who has probably had the initial lesion of syphilis, even if no other symptoms are present, is a very suspicious circumstance, which should lead to a careful weighing of the indications for and against a mercurial treatment.

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS. SOCIETIES.
Mondays, Feb. 5 *and* 19.—Chicago Medical Society. Regular meetings.
Mondays, Feb. 12 *and* 26.—Chicago Soc. of Phys. and Surgeons. Regular meetings.
CLINICS. *Every Monday.*
At Eye and Ear Infirmary, 2 P. M.—Prof. Holmes.
At Central Dispensary (Wood and Harrison sts.)—2 P.M. *Gynecological*, Dr. Adolphus; 3 P.M. *Diseases of Children*, Dr. R. S. Hall.
At Mercy Hospital—2 P. M., *Surgical*, Prof. Andrews.
At Rush College—2¼ P. M., *Medical*, Dr. Bridge.
At Chicago College, 2 P. M *Gynecological*—Prof. Merriman.
LECTURES. *Every Monday.*
At Rush Medical College (Harrison and Wood sts.)—9½ to 12½ o'clock, Profs. Freer, Lyman and Powell; 4 to 6, Profs. Gunn and Haines. At Chicago College—8½ to 12½, Profs. Jewell, Hyde, Hatfield and Bond; 3 to 6, Profs. Nelson and Davis, Quine and Andrews, and Roler. At Woman's College—8½ to 11½, Profs. Hotz, Marguerat and Earle; 3 to 5, Profs. Paoli and Stevenson.

TUESDAYS. SOCIETIES.
Tuesday, Feb. 13.—Academy of Science. Regular meeting at 8 P.,M. (263 Wabash av.)
CLINICS. *Every Tuesday.*
At Eye and Ear Infirmary—2 P. M., Prof. Jones.
At County Hospital—2 P. M., *Medical*, Prof. Bevan. 3 P. M., *Surgical*, Prof. Bogue.
At Mercy Hospital—2 P. M., *Medical*, Prof. Hollister.
At Chicago College—2 P. M., *Gynecological*, Prof. Roler.
At Central Dispensary—2, *Surgical*, Dr. Graham.
LECTURES. *Every Tuesday.*
At Rush College—9½ to 12½, Profs. Miller, Allen and Parkes; 4 to 6, Profs. Gunn and Haines. At Chicago College—8½ to 12½, Profs. Jewell, Quine, Merriman and Bond; 3 to 6, Profs. Johnson and Nelson, Andrews and Hatfield, and Byford. At Woman's College—9 to 12, Profs. Bartlett, Curtis and Fitch; 4 to 6, Profs. Hayes and Macdonald.

WEDNESDAYS. CLINICS. *Every Wednesday.*
At Eye and Ear Infirmary—2 P.M., Prof. Holmes. [Montgomery.
At County Hospital—2 P. M., *Gynecological*, Prof. Fitch; 2 P. M., *Ophthalmological*, Dr.
At Chicago College—2 P. M., *Gynecological*, Prof. Nelson.
At Mercy Hospital—2 P. M., *Ophthalmological*, Prof. Jones.
At Central Dispensary—3 P. M., *Dermatological*, Dr. Maynard.
LECTURES. *Every Wednesday.*
At Rush College—9½ to 12½, Profs. Freer, Allen and Parkes; 4 to 6, Profs. Etheridge and Haines. At Chicago College—8½ to 12½, Profs. Hyde, Isham, Hatfield and Bond; 3 to 6, Profs. Davis and Curtis, Quine and Jones, and Roler. At Woman's College—8:30 to 10:30, Profs. Hotz and Marguerat; 11, Prof. Blake; 3 to 6, Profs. Paoli, Graham and Stevenson.

THURSDAYS. CLINICS. *Every Thursday.*
At Eye and Ear Infirmary—2 P. M., Prof. Hotz.
At Mercy Hospital—2 P. M., *Medical*, Prof. Davis. [*tem*, Prof. Lyman.
At Rush College—2 P. M., *Medical*, Prof. Ross; 3 P. M., *Diseases of the Nervous Sys-*
At Chicago College—2 P. M., *Gynecological*, Prof. Merriman.
At Central Dispensary—2 P.M., *Surgical*, Dr. Graham.
LECTURES. *Every Thursday.*
At Rush College—9½ to 12½, Profs. Miller, Allen and Parkes; 4 to 6, Profs. Gunn and Etheridge. At Chicago College—8½ to 12½, Profs. Hollister, Isham, Merriman and Bond; 3 to 6, Profs. Johnson and Nelson, Andrews and Hatfield, and Byford. At Woman's College—9 to 12, Profs. Bartlett, Curtis and Fitch; 4 to 6, Profs. Thompson and Macdonald.

FRIDAYS. SOCIETIES.
Friday, Feb. 9.—State Microscopical Society of Illinois. Regular meeting, 8 P. M.
CLINICS. *Every Friday.*
At County Hospital—2 P. M., *Medical*, Prof. Bevan; 3 P. M., *Surgical*, Prof. Bogue.
At Mercy Hospital—2 P. M., *Medical*, Prof. Davis.
At Chicago College—2 P. M., *Gynecological*, Prof. Roler. [*dren*, Dr. R. S. Hall.
At Central Dispensary—2 P. M., *Gynecological*, Dr. Adolphus; 3 P.M., *Diseases of Chil-*
LECTURES. *Every Friday.*
At Rush College—9½ to 12½, Profs. Freer, Allen and Parkes; 4 to 6, Profs. Gunn and Holmes. At Chicago College—8½ to 12½, Profs. Hollister, Isham, Hatfield and Bond; 3 to 6. Profs. Davis and Curtis, Jones and Quine, and Roler. At Woman's College—9 to 12, Profs. Dyas, Marguerat and Earle; 3 to 5, Prof. Hayes; 5, Prof. Stevenson.

SATURDAYS. CLINICS. *Every Saturday.*
At Chicago College—2 P. M., *Surgical*, Prof. Andrews or Isham; *Gynecological*, Prof. Nelson; 3 P. M., *Medical*, Prof. Johnson.
At Rush College—2 P. M., *Surgical*, Prof. Gunn.
LECTURES. *Every Saturday.*
At Rush College—8½ to 12½, Profs. Lyman, Miller, Etheridge and Parks. At Chicago College, 8½ to 11½, Profs. Hollister, Quine and Hyde; 3 to 6, Profs. Nelson and Johnson, Andrews and Quine and Byford. At Woman's College—9 to 12, Profs. Bartlett, Earle and Fitch; 3 to 6, Profs. Paoli, Thompson and Macdonald.

At all the above named Clinics visiting regular practitioners are, we believe, admitted.
At the South Side Dispensary (Chicago College) there are six daily special Clinics, for sections of the classes of the Chicago College.